AGENDA & MINUTES (Unconfirmed) - IEEE 802 LMSC EXECUTIVE COMMITTEE MEETING

Thursday, November 11, 1999 - 7:00 p.m.

Hyatt Regency Kauai

1. MEETING CALLED TO ORDER

Jim Carlo called the meeting to order at 7:05 PM. Members in attendance were:

Jim Carlo	- Chair, IEEE 802 LAN / MAN Standards Committee
Paul Nikolich	- Vice Chair, IEEE 802 LAN / MAN Standards Committee
Buzz Rigsbee	- Executive Secretary, IEEE 802 LAN / MAN Standards Committee
Howard Frazier	- Recording Secretary, IEEE 802 LAN / MAN Standards Committee
Robert Grow	- Treasurer, IEEE 802 LAN/MAN Standards Committee
Bill Lidinsky	- Chair, IEEE 802.1 - HILI Working Group
Dave Carlson	- Chair, IEEE 802.2 - Logical Link Control Working Group
Geoff Thompson	- Chair, IEEE 802.3 - CSMA/CD Working Group
Bob Love	- Chair, IEEE 802.5 - Token Ring Working Group
Chip Benson	- Chair, IEEE 802.8 - Fiber Optic TAG
Vic Hayes	- Chair, IEEE 802.11 - Wireless LANs Working Group
Bob Heile	- Chair, IEEE 802.15 – Wireless PAN Working Group
Roger Marks	- Chair, IEEE 802.16 – Broadband Wireless Access Working Group

The meeting was attended by approximately 25 IEEE 802 Working Group members and several guests including Jerry Walker and Janet Rutigliano.

2. APPROVE OR MODIFY AGENDA

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          DRAFT AGENDA  -  IEEE 802 LMSC EXECUTIVE COMMITTEE MEETING
               Thursday, November 11, 1999 - 7:00 p.m.
                         Hyatt Regency Kauai

1.       MEETING CALLED TO ORDER                                  -Carlo    1  07:00 PM
2.       APPROVE OR MODIFY AGENDA                                 -Carlo    4  07:01 PM
3.       TREASURER'S REPORT                                       -Grow     5  07:05 PM
     Category  (* = consent agenda)
4.1  ME  PAR Approval 802.3ae - 10 Gigabit Ethernet               -Thompson 10 07:10 PM
4.2  ME  PAR Approval 802.3af - DTE Power via MDI                 -Thompson 10 07:20 PM
4.3  ME  PAR Approval P1802.3 Rev. - 10BASE-T Conformance T       -Thompson 5  07:30 PM
4.4  ME* PAR Approval P802.11b Corrigenda                         -Hayes    10 07:35 PM
4.5  ME  PAR Approval 802.15.2 Coexistence                        -Heile    10 07:45 PM
4.6  ME  Proposed Letter to IEEE Balloting Services               -Love     10 07:55 PM
4.7  ME  Letter to UK RadioComs Agency                            -Hayes    5  08:05 PM
4.8  ME  Letter to FCC                                           -Hayes    10 08:10 PM
4.9  ME  Recommendation to start the Trademark process for       -Heile    5  08:20 PM
4.10 ME  ITU - 802 Participation                                 -Carlo    10 08:25 PM
4.11 ME  Letter to ITU-R Rapporteur on Radio LAN                 -Hayes    10 08:35 PM
4.12 ME  802.5v Gigabit TR to LMSC Sponsor Ballot                -Love     15 08:45 PM
4.13 ME  802.5w Corrigenda to RevCom - Conditional Approval      -Love     5  09:00 PM
4.14     Break                                                   -         15 09:05 PM
4.15 ME  Letter Regarding IPF                                    -Carlo    15 09:20 PM
4.16 ME  IEEE 802 Stds Availability                              -Carlo    15 09:35 PM
4.17 MI  Rules Change Proposal - To Letter Ballot                -Lidinsky 10 09:50 PM
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4.18 MI  Extension of MAC Enhancements Study Group          -Hayes    5  10:00 PM
4.19 MI  Status and Affirmation of 802.14 Shutdown Plan     -Nikolich 10 10:05 PM
4.20 MI  802.15 High Rate WPAN Study Group Formation        -Heile    10 10:15 PM
4.21 MI  LCD Projector Use Guidelines                       -Rigsbee  5  10:25 PM
4.22 MI  802.16 Study Group                                 -Marks    5  10:30 PM
4.23 DT  Party like it's Y2K                                -Carlo    10 10:35 PM
4.24 DT  Plenary Schedule Feedback                          -Carlo    5  10:45 PM
4.25 DT  Future Meeting Venues                              -Rigsbee  10 10:50 PM
4.26 DT  Network Support Update                             -Kerry    5  11:00 PM
4.27 ME Withdraw of 802.1r (GPRP)                           -Lidinsky 5  11:05 PM
4.28 MI IETF Liaison                                        -Lidinsky 5  11:10 PM
4.29 II March 2000 Elections                                -Carlo    5  11:15 PM
4.30 II  Cookie Motion                                      -Marks    5  11:20 PM
4.31 ME 802.3 Liaison Letters                               -Thompson 10 11:25 PM
4.32 ME 802.3ad to Sponsor Ballot                           -Thompson 5  11:35 PM
4.33 II  Future Plans for 802.5 Working Group               -Love     5  11:40 PM

         ME - Motion, External        MI - Motion, Internal
         DT- Discussion Topic           II - Information Item
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Approve agenda as modified Love/Carlson 9/0/1

3.0 Treasurer's Report – Bob Grow

(see file thutreasrep.pdf)

Two big factors contributed to refreshment and social costs. Location (Hawaii) and families.

John Messenger states that since Hawaii is such an expense venue, it should be avoided in the future.

Computer Society sent us a letter telling us to comply with the meeting rules. Computer Society will exempt us from their demand to confiscate any excess funds over $10,000 if we give them signature authority on our checking account. They also want us to conduct an audit. Bob plans to get an audit done on or about the March 2000 meeting. Maybe have an auditor come out to Albuquerque.

One questionable deadbeat. It looks like some one is forging a signature in 802.3 which makes it look like a person (who shall remain nameless) has been attending meetings since March, but no one remembers seeing that individual.

DATE: 11 November 1999

TO: SEC

FROM: Bob Grow

SUBJECT: Treasurer's Report (Item 3)

1. Estimated Statement of Operations for November 1999 (Kauai) meeting (attached)
2. Rolling Budget (attached)
3. Computer Society budget submission
   a. The two year budget submitted to the CS will be summarized from the Rolling Budget
   b. International Participation Fee will be recategorized and adjusted per Executive Committee discussion later in the agenda.
4. Compliance with Computer Society and SA financial policies
   a. Draft letter from Computer Society on maximum balance and checking signature (attached). The new processes give significant visibility into our financial operations. The SA also wants checking account signature.
   b. Audit Requirements. I am (on a time available basis) investigating our options for a financial audit. An annual audit is required per recently adopted CS financial policies. The IEEE can provide this audit, which is priced as a percentage of income. The audit period would be 1999, and coverage is typical and includes a sample of financial records, contracts, and minutes.
5. Deadbeat list

   802.3 Abe Ali Nov 98, Jul 99, Nov 99

IEEE Project 802
Estimated Statement of Operations
Nov 1999 Meeting

open	**7 Nov 1999 Operating Reserve**			**46,700**	
Nov 1999 Meeting Income:				***Actual***	*Budget*
152	**Registrations@**	**$300**	**45,600**		
322	**Registrations@**	**$250**	**80,500**		
0	**Registrations@**	**$100**	**0**		
	Subtotal			**126,100**	112,625
	Deadbeat Registrations			**0**	
	Cancellation Fees			**475**	
	Bank Interest			**100**	
	Copying Income				
	Other			**0**	
plus	**TOTAL Income**			**126,675**	112,625

Nov 1999 Meeting Expenses:	***Estimate***	*Budget*	
Audio Visual Rentals	**7,000**	6,000	
Bank Charges	**25**	25	
Copying	**5,900**	6,390	
Credit Card Discounts	**3,670**	3,277	*
International Program Fee	**42,600**	38,300	*
Meeting Administration	**24,600**	32,166	*
Phone & Electrical	**2,600**	900	
Refreshments	**25,800**	16,188	
Shipping	**4,500**	4,500	
Social	**23,411**	15,000	
Supplies			
Other	**1,400**		
minus **TOTAL Meeting Expense**	**141,506**	122,746	
minus **Equipment Expense**		0	
equals **Mar 2000 Operating Reserve**	**31,869**		
Net Change in Operating Reserve	**(14,831)**	(10,121)	

* Actual charges are based on registration, budget is based on registration forecast.

	1999				2000				2001			
	Austin *Actual*	Montreal *Actual*	Kauai *Estimate*		Albq. *Budget*	LaJolla *Budget*	Tampa *Budget*		Hilton Head *Budget*	Portland *Budget*	Austin *Budget*	
Meeting Income:	***March***	***July***	***Nov***	***1999***	***March***	***July***	***Nov***	***2000***	***March***	***July***	***Nov***	***2001***
Registrations	**415**	**469**	**474**		**425**	**400**	**400**		**375**	**375**	**375**	
Preregistration fee	**275**	**250**	**250**		**250**	**250**	**250**		**275**	**275**	**275**	
On-site registration fee	**300**	**300**	**300**		**300**	**300**	**300**		**300**	**300**	**300**	
Average Fee	**286**	**286**	**286**		**265**	**260**	**260**		**285**	**285**	**285**	
Subtotal	**118,800**	**124,650**	**126,100**	**369,550**	**112,625**	**104,000**	**104,000**	**320,625**	**106,875**	**106,875**	**106,875**	**320,625**
Bank Interest	**263**	**202**	**100**	**566**	**200**	**200**	**200**	**600**	**150**	**150**	**150**	**450**
TOTAL Income	**119,063**	**124,852**	**126,200**	**370,116**	**112,825**	**104,200**	**104,200**	**321,225**	**107,025**	**107,025**	**107,025**	**321,075**
Meeting Expenses:	***March***	***July***	***Nov***	***2000***	***March***	***July***	***Nov***	***2000***	***March***	***July***	***Nov***	***2001***
Audio Visual Rentals	**4,208**	**5,911**	**7,000**	**17,119**	**5,000**	**5,000**	**5,000**	**15,000**	**5,000**	**5,000**	**5,000**	**15,000**
Bank Charges	**1**	**133**	**25**	**159**	**25**	**25**	**25**	**75**	**30**	**30**	**30**	**90**
Copying	**4,819**	**2,384**	**5,900**	**13,103**	**5,950**	**6,000**	**5,200**	**17,150**	**4,500**	**4,500**	**4,500**	**13,500**
Credit Card Discounts	**3,383**	**3,245**	**3,670**	**10,298**	**3,154**	**2,912**	**2,912**	**8,978**	**2,993**	**2,993**	**2,993**	**8,978**
International Program Fee	**37,400**	**42,000**	**42,600**	**122,000**	**38,200**	**36,000**	**36,000**	**110,200**	**33,700**	**33,700**	**33,700**	**101,100**
Meeting Planners	**36,302**	**32,999**	**24,600**	**93,901**	**31,625**	**30,600**	**30,600**	**92,825**	**30,325**	**30,325**	**30,325**	**90,975**
Phone & Electrical	**822**	**618**	**2,600**	**4,040**	**800**	**800**	**800**	**2,400**	**800**	**800**	**800**	**2,400**
Refreshments	**15,814**	**9,988**	**25,800**	**51,602**	**10,625**	**14,400**	**13,200**	**38,225**	**12,000**	**12,000**	**12,000**	**36,000**
Shipping	**2,248**	**1,855**	**4,500**	**8,603**	**3,000**	**3,000**	**3,000**	**9,000**	**3,000**	**3,000**	**3,000**	**9,000**
Social	**9,596**	**7,125**	**23,411**	**40,132**	**7,650**	**9,200**	**8,400**	**25,250**	**7,500**	**7,500**	**7,500**	**22,500**
Supplies	**0**	**0**	**0**	**0**	**200**	**200**	**200**	**600**	**200**	**200**	**200**	**600**
Other	**1,100**	**70**	**1,400**	**2,570**	**2,100**		**1,500**	**3,600**	**2,000**		**1,500**	**3,500**
Meeting Equipment	**4,924**	**20,150**	**0**	**25,074**	**5,000**	**5,000**	**5,000**	**15,000**	**5,000**	**5,000**	**5,000**	**15,000**
TOTAL Meeting Expense	**120,617**	**126,479**	**141,506**	**388,602**	**113,329**	**113,137**	**111,837**	**338,303**	**107,048**	**105,048**	**106,548**	**318,643**
NET to Operating Reserve	**(1,554)**	**(1,627)**	**(15,306)**	**(18,486)**	**(504)**	**(8,937)**	**(7,637)**	**(17,078)**	**(23)**	**1,978**	**478**	**2,433**
Projected Opening Reserve	**49,480**	**47,963**	**46,336**		**31,031**	**30,527**	**21,590**		**13,953**	**13,931**	**15,908**	
Projected Closing Reserve	**47,926**	**46,336**	**31,031**		**30,527**	**21,590**	**13,953**		**13,931**	**15,908**	**16,386**	
Projected Closing Cash	**36,726**	**35,136**	**19,831**		**19,327**	**10,390**	**2,753**		**2,731**	**4,708**	**5,186**	

27 September 1999

Mr. Bob Grow
LMSC Treasurer

DRAFT DRAFT DRAFT DRAFT DRAFT

Dear Bob,

In order to be in accordance with Computer Society Policies and Procedures on the operation of external checking accounts by society entities, we ask that the IEEE 802 LAN/MAN Standards Committee (LMSC) forward a signature card to be signed by the CS Executive Director or his designee.

The CS Policies and Procedures for external checking accounts can be found in Section 17.7.1 (http://www.computer.org/csinfo/ppm/sect17.htm) and are also enclosed within this letter.

Per these financial procedures, this letter is also granting explicit approval to the LMSC to operate with an excess of $10,000 in its checking account. The LMSC will continue to handle its financial operations per the status-quo. However, we do also ask that we receive, at a minimum, a copy of at least four bank statements a year to be submitted quarterly and kept on file in the Computer Society office.

We hope that this arrangement will be acceptable to the IEEE 802 LAN/MAN Standards Committee and we appreciate your cooperation.

Sincerely,

Anne Marie Kelly
Director of Volunteer Services

Enclosure

Cc: Steve Diamond, *Vice President, Standards Activities Board*
Gary Robinson, *Treasurer, Standards Activities Board*
Jim Carlo, *Chair, IEEE 802 LMSC*
Tracy Woods, *Volunteer Services Coordinator*

Computer Society Policies and Procedures
(http://www.computer.org/csinfo/ppm/ppmtoc.htm)

SECTION 17 - FINANCES
17.7.1 Checking Accounts

1. Separate checking accounts may be kept by conference, standards and technical committees and other society entities if the operation of the accounts conforms to the policies herein. Such accounts may be established either at any local Merrill Lynch, Pierce, Fenner & Smith office through the society's Working Capital Management Account (WCMA), or with a local bank. WCMA account opening documents are available through the director of finance and administration.

2. If a separate locally based checking account is kept:

a. A designated representative shall be nominated by the appropriate committee chair and approved by the appropriate vice president.

b. Upon receipt of account signature cards signed by the designated representative, and the name, address, and telephone number of the bank, the executive director or his designee shall sign the signature cards and return these to open the checking account.

c. The Computer Society executive director or his designee must have access to the checking account and must receive a copy of the monthly statement of account.

d. At the conclusion of the committee's activities, the checking account shall be closed and the final balance submitted to the Computer Society with the final report.

e. The balance of any checking account shall not be in excess of $10,000 without the explicit approval of the appropriate officer of the society. Any funds in the checking account in excess of that amount shall be transferred by the designated representative back to the Computer Society. These excess funds from the checking account shall be credited to the appropriate entity or activity in the society accounting records.

4.1 PAR Approval 802.3ae Gigabit Ethernet – Thompson

(see file agenda_item_4_1.pdf)

Jonathan Thatcher reviews PAR and 5 Criteria. WG Vote was 90/0/0.

LMSC Motion: Approve 802.3ae PAR for 10 Gigabit Ethernet

M: Thompson

S: Frazier

Approved 11/0/0 at 7:37 pm

802.3 Report from HSSG

IEEE 802 Plenary

Kauai, Hawaii

November 11, 1999

Jonathan Thatcher

HSSG Project Approval Request Key Elements (1 of 3)

TITLE

Information Technology - Local & Metropolitan Area Networks - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications - Media Access Control Parameters, Physical Layers and Management Parameters for 10 Gb/s Operation

Note: This Project is a supplement to an existing standard (not a new standard; not an update to an existing PAR)

HSSG Project Approval Request Key Elements (2 of 3)

- **Target completion date:** March 2002
- **Purpose:** to extend the 802.3 protocol to an operating speed of 10 Gb/s and to expand the Ethernet application space to include Wide Area Network links in order to provide a significant increase in bandwidth while maintaining maximum compatibility with the installed base of 802.3 interfaces, previous investment in research and development, and principles of network operation and management
- For code point, add to **coordination**: ITU SG15, Question 11

HSSG Project Approval Request Key Elements (3 of 3)

- **Scope:** Define 802.3 Media Access Control (MAC) parameters and minimal augmentation of its operation, physical layer characteristics and management parameters for transfer of LLC and Ethernet format frames at 10 Gb/s using full duplex operation as defined in the 802.3 standard. In addition to the traditional LAN space, add parameters and mechanisms that enable deployment of Ethernet over the Wide Area Network operating at a data rate compatible with OC-192c and SDH VC-4-64c payload rate.
- **Similar Projects:** There is no other project that uses the 802.3 MAC at speeds above 1000 Mb/s..

1. Broad Market Potential

Broad set(s) of applications
Multiple vendors, multiple users
Balanced cost, LAN Vs. attached stations

- **Rapid growth of network and internet traffic has placed high demand on the existing infrastructure motivating the development of higher performance links. Quantitative presentations have been made to the 802.3 HSSG indicating significant market opportunity.**
- **10 Gb/s 802.3 solution extends Ethernet capabilities providing higher bandwidth for multimedia, distributed processing, imaging, medical, CAD/ CAM, and pre-press applications by improving the performance of:**
  - **LAN Backbone and Server and Gateway Connectivity**
  - **Switch aggregation**
  - **the MAN, WAN, Regional Area Network (RAN), and Storage Area Network (SAN)**
- **140 participants attended the 10 Gigabit call-for-interest, representing at least 55 companies, indicate that they plan to participate in the standardization of 10 Gb/s 802.3. 139 Indicated that this is the right time to start. Attendance and interest has increased steadily since that time.**
- **This level of commitment indicates that a standard will be supported by a large group of vendors. This in turn will ensure that there will be a wide variety of equipment supporting a multitude of applications.**
- **Prior experience scaling 802.3 across the range of 1 to 1000 Mb/ s indicates that the cost balance between adapters, switches, and the infrastructure remains roughly constant. 10 Gb/s Ethernet should continue this trend.**

2. Compatibility with IEEE Standard 802.3

Conformance with CSMA/ CD MAC, PLS
Conformance with 802.2
Conformance with 802 FR

- **The proposed standard will conform to the full-duplex operating mode of the 802.3 MAC, appropriately adapted for 10 Gb/ s operation. Half-duplex (CSMA/CD) operation will not be supported at 10 Gb/s.**
- **As was the case in previous 802.3 standards, new physical layers will be defined for 10 Gb/s operation.**
- **The proposed standard will conform to the 802.3 MAC Client Interface, which supports 802.2 LLC.**
- **The proposed standard will conform to the 802.1 Architecture, Management and Interworking.**
- **The proposed standard will conform with the 802 Functional Requirements Document (with the possible exception of Hamming distance).**
- **The proposed standard will define a set of systems management objects which are compatible with OSI and SNMP system management standards.**

3. Distinct Identity

Substantially different from other 802.3 specs/ solutions
Unique solution for problem (not two alternatives/ problem)
Easy for document reader to select relevant spec

- **The proposed standard is an upgrade path for 802.3 users, based on the 802.3 MAC, running at 10 Gb/s.**
- **By adapting the existing 802.3 MAC protocol for use at 10 Gb/s, this proposed standard will maintain maximum compatibility with the installed base of over 600 million Ethernet nodes.**
- **The established benefits of the 802.3 MAC include:**
  - **Deterministic, highly efficient full-duplex operation mode**
  - **Well-characterized and understood operating behavior**
  - **Broad base of expertise in suppliers and customers**
  - **Straightforward bridging between networks at different data rates**
- **The Management Information Base (MIB) for 10 Gb/s 802.3 will be extended in a manner consistent with the 802.3 MIB for 10 / 100 / 1000 Mb/s operation. Therefore, network managers, installers, and administrators will see a consistent management model across all operating speeds.**
- **Two PHY families will address two distinct application spaces, the LAN and the WAN.**
- **The proposed standard will be a supplement to the existing 802.3 standard, formatted as a collection of new clauses, making it easy for the reader to select the relevant specification.**

4. Technical Feasibility

Demonstrated feasibility; reports - - working models
Proven technology, reasonable testing
Confidence in reliability

- **Technical presentations, given to 802.3, have demonstrated the feasibility of using the 802.3 in useful network topologies at a rate of 10 Gb/s.**
- **The principle of scaling the 802.3 MAC to higher speeds has been well established by previous work within 802.3. The 10 Gb/s work will build on this experience.**
- **The principle of building bridging equipment which performs rate adaptation between 802.3 networks operating at different speeds has been amply demonstrated by the broad set of product offerings that bridge between 10, 100, and 1000 Mb/s.**
- **Vendors of optical components and systems are building reliable products which operate at 10 Gb/s, and meet worldwide regulatory and operational requirements.**
- **Component vendors have presented research on the feasibility of physical layer signaling at a rate of 10 Gb/s on fiber optic media using a wide variety of innovative low cost technologies.**
- **10 Gb/s Ethernet technology will be demonstrated during the course of the project, prior to the completion of the sponsor ballot.**

5. Economic Feasibility

Cost factors known, reliable data
Reasonable cost for performance expected
Total Installation costs considered

- **Cost factors are extrapolated from the OC-192 component supplier base and technology curves.**
- **A target cost increase of 3X of 1000BASE- X with a ten-fold increase in available bandwidth in the full duplex operating mode will result in an improvement in the cost- performance ratio by a factor of 3. This cost model has been validated during both the 100 and 1000 Mb/s Ethernet deployment.**
- **Customers will in some cases be able to re-use fiber that has been installed in accordance with ISO/ IEC 11801, and in other existing fiber facilities.**
- **Installation costs for new fiber runs based on established standards are well known and reasonable.**
- **Network design, installation and maintenance costs are minimized by preserving network architecture, management, software, and structured cabling.**

Motion 1

- Approve 802.3 HSSG PAR & 5 Criteria
- Request 802 Executive to Approve PAR and Forward to NesCom
  - Moved: Jonathan Thatcher in behalf of HSSG
  - Seconded: Thomas Mathey
  - Technical: Yes
  - Yes: **90**
  - No: 0
  - Abstain: 0

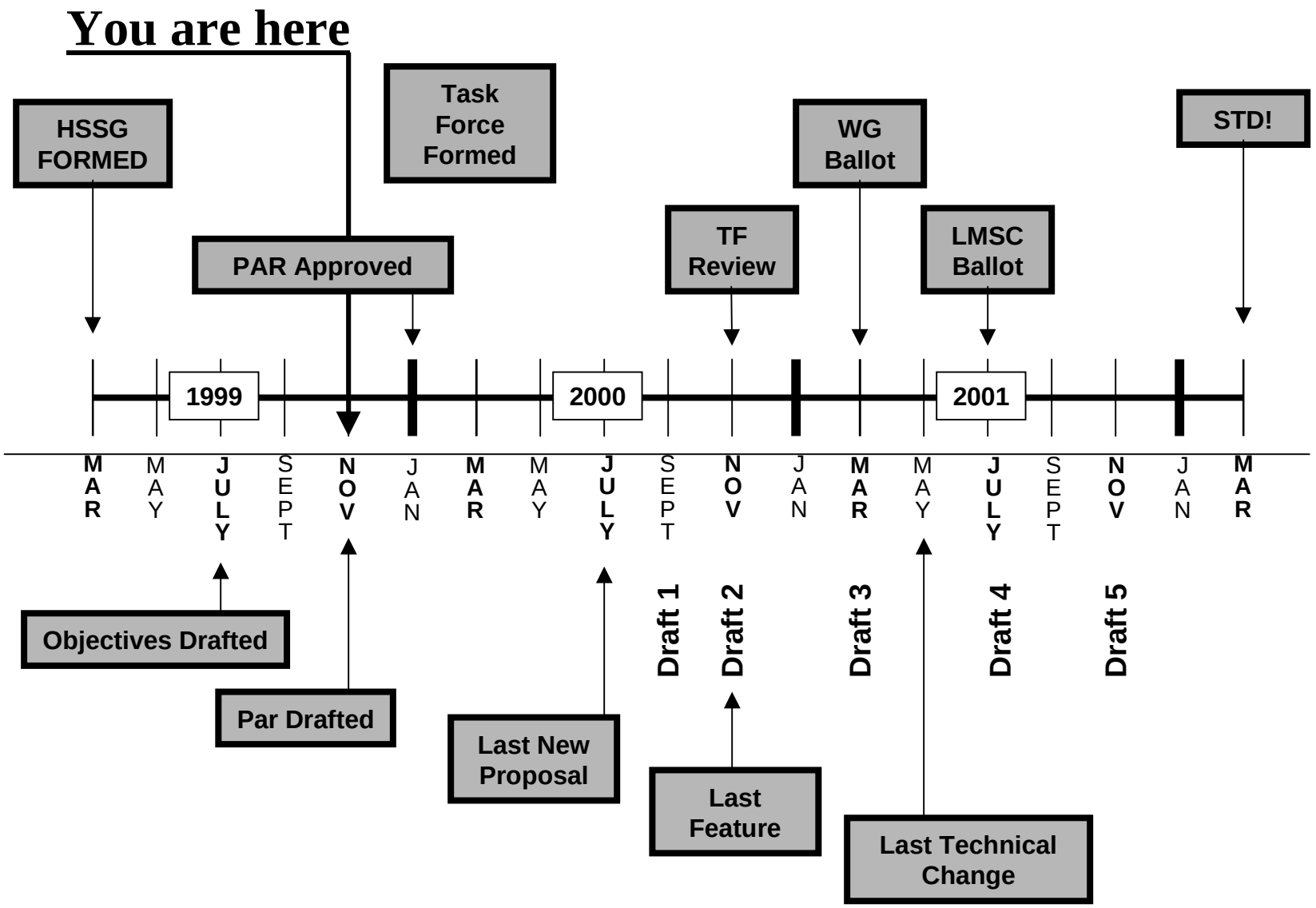
HSSG Objectives (1 of 2)

- Preserve the 802.3/Ethernet frame format at the MAC Client service interface.
- Meet 802 Functional Requirements, with the possible exception of Hamming Distance.
- Preserve minimum and maximum FrameSize of current 802.3 Std.
- Support full-duplex operation only.
- Support star-wired local area networks using point-to-point links and structured cabling topologies.
- Specify an optional Media Independent Interface (MII).
- Support proposed standard P802.3ad (Link Aggregation)
- Support a speed of 10.000 Gb/s at the MAC/PLS service interface

HSSG Objectives (2 of 2)

- Define two families of PHYs
  - A LAN PHY, operating at a data rate of 10.000 Gb/s
  - A WAN PHY, operating at a data rate compatible with the payload rate of OC-192c/SDH VC-4-64c
- Define a mechanism to adapt the MAC/PLS data rate to the data rate of the WAN PHY
- Provide Physical Layer specifications which support link distances of:
  - At least 100 m over installed MMF
  - At least 300 m over MMF
  - At least 2 km over SMF
  - At least 10 km over SMF
  - At least 40 km over SMF
- Support fiber media selected from the second edition of ISO/IEC 11801 (802.3 to work with SC25/WG3 to develop appropriate specifications for any new fiber media).

Long Term Schedule



4.2 PAR Approval 802.3af DTE Power via MDI – Thompson

(see file agenda_item_4_2.pdf)

Steve Carlson reviews PAR and 5 Criteria.

Minor change to scope and purpose statements. Inserted the word “balanced” to better describe cabling. Also added a coordination point for P1394b. Carlo notes that Nescom will assume that coordination within the Computer Society will be handled by the Computer Society.

(see file 802_3af_TR42.pdf)

(see file 802_3af_1394.pdf)

LMSC Motion: Approve the 802.3af PAR and 5 criteria for DTE Power via MDI.

M: Thompson

S: Nikolich

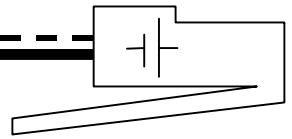
Carlo asks if the “health and safety issues” box on the PAR is checked? Thompson answers no.

Approved 11/0/0 at 7:45 pm.

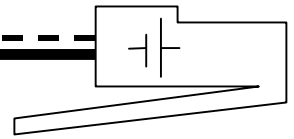
DTE Power via MDI

Study Group PAR and 5 Criteria Report to 802.3 EXEC

Steve Carlson, SG Chair



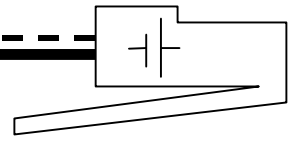
TITLE: [Information technology-
Telecommunications and information
exchange between systems-
Local and metropolitan area networks-
Specific requirements-
Part 3: Carrier sense multiple access with
collision detection (CSMA/CD)
access method and physical layer
specifications
Data Terminal Equipment (DTE) Power via
Media Dependent Interface (MDI)]



PAR
Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)

Scope:

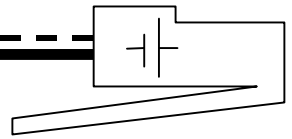
"Define methodology for the provision of power via ~~unshielded twisted pair~~ balanced cabling to connected Data Terminal Equipment with 802.3 interfaces. The amount of power will be limited by cabling physics and regulatory considerations. Compatibility with existing equipment will be considered."



PAR
Data Terminal Equipment (DTE) Power via Media Dependent Interface (MDI)

Purpose:

"To provide power for a new class of devices with 802.3 interfaces enabled by progress in silicon technology. These devices are characterized by low power requirements and LAN connectivity."

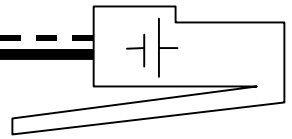


PAR for DTE Power via MDI

802.3 Motion: That the 802.3 Working Group accept the DTE Power via MDI PAR and 5 Criteria.

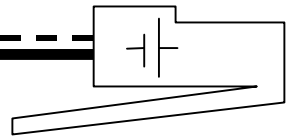
Request to forward to the 802 EXEC for submission to NESCOM.

By: Steve Carlson on behalf of DTE Power
Seconded: Arlan Anderson
Technical 75%
Y:68 N:0 A:2



5 Criteria

- Broad Market Potential
  - IP telephones, wireless access points, industrial controls, building automation, security systems, home automation, etc.
  - 8.8 million of units projected for IP telephones by 2001
  - 700K units for wireless access points by 2001
  - 3 million units for building automation and controls by 2003



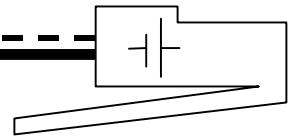
5 Criteria

- Multiple vendors, multiple users
  - 44 individuals, 33 companies in SG
  - TR-41.3.4 and TR-41.4 have requested liaison
  - 802.11 has expressed interest
- Balanced Cost
  - Enables new class of low-power LAN-based devices

By: Steve Carlson on behalf of DTE Power

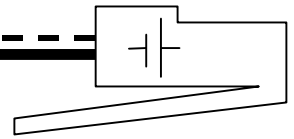
Second: Bill Quackenbush

Vote on **“Broad Market Potential”** Y:75 N:0 A:1



5 Criteria

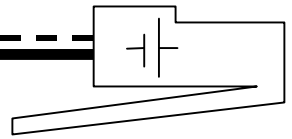
- Compatibility with 802.3 Standards
  - Conformance with CSMA/CD MAC, PLS.
    - It is our intention to be compatible with 10BASE-T and 100BASE-TX UTP, and do no harm to1000BASE-T, with no changes to the existing MAC.
  - Conformance with 802.2.
    - There will be no changes to the current MAC client interface.



5 Criteria

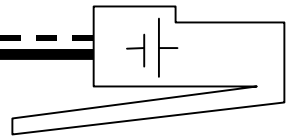
- Conformance with 802 Functional Requirements.
  - The proposed standard will conform to the 802 Functional Requirements.
- Compatibility with 802.3 Standards

  Y:71 N:1 A:0



5 Criteria

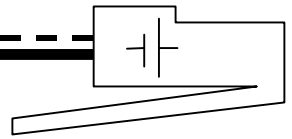
- Distinct Identity
  - Substantially different from other 802.3 specifications/ solutions.
    - No existing 802 standard or project addresses power.
  - Unique solution for problem (not two alternatives per problem).
    - Only a single powering technique will be standardized. There will not be multiple alternatives.



5 Criteria

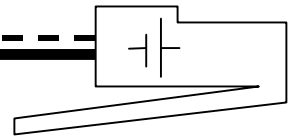
- Easy for document reader to select relevant spec.
  - The specification will be added to the 802.3 standard as a new clause.

- Distinct Identity Y: 73 N:0 A:1



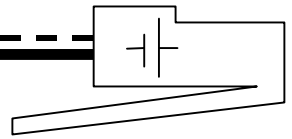
5 Criteria

- Technical Feasibility
  - Demonstrated feasibility, reports - - working models.
    - A draft for P802.9f proposed methodologies that would address powering via an MDI. There are existing proprietary solutions in the market; however, they may not meet all of the objectives of this proposed project.
  - Proven technology; reasonable testing.
    - This will be addressed as part of the project



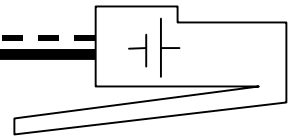
5 Criteria

- Confidence in reliability.
  - This will be addressed as part of the project.
- Technical Feasibility Y:67 N:0 A:5



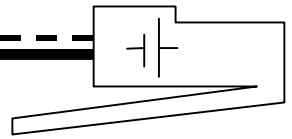
5 Criteria

- Economic Feasibility
  - Cost factors known, reliable data.
    - This will be addressed as part of the project. Power supply and distribution are mature
  - technologies and the cost factors well understood.
    - Reasonable cost for performance expected. The objective is to lower the total cost of ownership. This will be an enabler to numerous new classes of “network appliances.”



5 Criteria

- Total installation cost considered.
  - An objective is to lower the total cost of installation.
- Economic Feasibility Y:68 N:0 A:0



To the Chairs of TIA TR-42, ISO/IEC JTC-1 SC 25/WG 3:

Dear Sirs:

IEEE 802.3 is in the process of establishing a project (P802.3af) to add power distribution for 10/100BASE-T Ethernet. As part of this project we must determine the permissible current that may be carried on a single conductor, as well as the total allowable power dissipation of all four pairs in the jacket.

We are soliciting your input on these issues. The development of this standard is of the utmost importance to the industry. Therefore we are requesting your response as soon as possible as we are already in the process of defining the parameters.

Very Truly Yours,

Geoffrey O. Thompson
Chair, 802.3 WG

To the Chair of IEEE 1394:

Dear Sir,

We understand that your group is in the process of developing a standard for IEEE 1394 over CAT5 cabling using an RJ-45 connector. IEEE 802.3 is in the process of establishing a project (P802.3af) to add power distribution for 10/100BASE-T Ethernet. An integral portion of our work is to identify the interaction of implementations as detailed in other standards. To that end, we request a copy of your current draft and would like to be placed on the distribution for future drafts and as a coordination point on your project.

We have not settled on an approach at this time. Presentations to date are available on our Web page, http://grouper.ieee.org/groups/802/3/power_study/public/index.html. Our next meeting will be in Dallas, TX on January 20 - 21, 2000. We would like to extend an offer to any members of your group to attend this meeting and become part of the project.

Very Truly Yours,

Geoffrey O. Thompson
Chair, 802.3 WG

4.3 PAR Approval P1802.3 Rev. 10BASE-T Conformance Test – Thompson

(see file agenda_item_4_3.pdf)

David Law presents PAR and 5 Criteria. This is an editorial task. WG vote on motion was 79/0/2.

LMSC Motion: Approve P1802.3 Rev. PAR and 5 Criteria

M: Thompson

S: Nikolich

Approved 11/0/0 at 7:50 pm

802.3 Conformance Test Methodology Revision P1802.3rev PAR and 5 Criteria Report to 802 Exec

IEEE 1802.3 reaffirmation

- IEEE1802.3 - Conformance Test Methodology for IEEE 802.3 Standards
- Only two produced
  - 1802.3-1991
    - Clauses 1 to 3 - Conformance Test boilerplate
    - Clause 4 - AUI Cable Conformance Test
  - 1802.3d-1993
    - Clause 6 - 10BASE-T MAU Conformance Test
- Documents now up for reaffirmation
  - Merge and remove redundant material

IEEE 1802.3rev PAR

- Title

  Conformance Test Methodology for IEEE Standards for Local and Metropolitan Area Networks: Carrier Sense Multiple Access with Collision detection (CSMA/CD) Access Method and Physical Layer Specifications

- Scope

  Editorial merge of existing material

IEEE 1802.3rev PAR (cont)

- Purpose

  To editorially merge the front matter from 1802.3 with the technical matter from 1802.3d (10BASE-T Conformance Test) whilst removing obsolete material (AUI Cable Conformance Test).

1. Broad Market Potential

Broad set(s) of applications
Multiple vendors, multiple users
Balanced cost, LAN vs. attached stations

- **Continued growth in the 10BASE-T market, with new entrants in the PHY market and an increasing trend towards the integration of 10BASE-T in products shows a continuing utility for the existing 10BASE-T Conformance Test Methodology.**
- **The AUI Cable has however likely disappeared from the marketplace, with new implementations extremely unlikely. In addition the AUI Cable Conformance Test Methodology has technical inaccuracies in it and for these reasons should be withdrawn.**
- **Combining the 10BASE-T Conformance Test Methodology standard (1802.3d-1993), with the required front matter from the AUI Cable Conformance Test Methodology standard (1802.3-1991), the base document, while removing the redundant AUI Cable Test Methodology will provide a standard with continuing utility.**

2. Compatibility with IEEE Standard 802.3

Conformance with CSMA/ CD MAC, PLS
Conformance with 802.2
Conformance with 802 FR

- **The 10BASE-T Conformance test will remain compatible with 802.3, 802.2 and the 802 FR.**

3. Distinct Identity

Substantially different from other 802.3 specs/ solutions
Unique solution for problem (not two alternatives/ problem)
Easy for document reader to select relevant spec

- **The 1802.3 10BASE-T Conformance Test Methodology standard will remain the only 10BASE-T Conformance Test Document.**

4. Technical Feasibility

Demonstrated feasibility; reports - - working models
Proven technology, reasonable testing
Confidence in reliability

- **This project is an editorial revision of existing material, no new Technical material will be added.**

5. Economic Feasibility

Cost factors known, reliable data
Reasonable cost for performance expected
Total Installation costs considered

- **Does not apply**

802.3 Motion

- IEEE 802.3 approves the PAR and 5 Criteria as submitted for 1802.3rev.
- IEEE 802.3 requests the IEEE 802 Executive to submit the 1802.3rev PAR to NESCOM.
- IEEE 802.3 authorise the Chair to request a 2 year extension to the 1802.3 and 1802.3d standards.

M: Quackenbush S: Nikolich Tech 75%

PASSED Date: 11 Nov 99

Y: 79 N: 0 A: 2 Time: 10:00am

802 Motion
(Agenda item 4.3)

Approve 1802.3rev PAR and 5 Criteria

M: Thompson S: Nikolich

Date: 11 Nov 99

Y: 11 N: 0 A: 0 Time: 7:54pm

4.4 PAR Approval P802.11b Corrigenda

Approved as part of the consent agenda

4.5 PAR Approval 802.15.2 Coexistence – Heile

WG Vote was 15/0/0

Marks suggests adding Bluetooth SIG to coordination. Accepted

Nikolich suggests that ETSI should be expanded to ETSI BRAN. Accepted

LMSC Motion: That the Coexistence PAR, DOC IEEE P802.15-99/086r3 be approved as modified to include ETSI BRAN and Bluetooth SIG as coordination points on submittal of drafts, by the Executive Committee and assigned the Project Number 802.15.2 as a Task Group within 802.15.

M: Heile

S: Hayes

Approved 12/0/0 8:00 PM

4.6 Proposed Letter to IEEE Balloting Services - Love

LMSC Motion: Approve sending the proposed note below (appropriately edited) to IEEE Balloting Services and the Computer Society.

(see file balloting.pdf)

Carlo will edit letter as needed. Carlo will mail letter to SEC reflector before sending to Balloting Services and Computer Society.

M: Love

S: Lidinsky

Approved 11/0/1 8:10 pm

Moved by RD Love
Seconded by
Motion:

Approve sending the proposed note below (appropriately edited) to IEEE Balloting Services

Approve	Do Not Approve	Abstain

Subject: Proposed Procedures for Electronic LMSC Ballot Process

The 802 SEC is of the opinion that the entire LMSC Sponsor ballot process should be conducted electronically (via e-mail and web).

As such we suggest the following procedures be considered by the IEEE ballot services to implement this fully electronic LMSC ballot process.

1. Noting that the most critical addresses of the people in the ballot pool are their email addresses, the entire process should be based on communication via those email addresses. As such a critical first step is to obtain the correct email addresses of the people that have volunteered to participate in LMSC ballots.
   To do so, please send out a mailing to the entire group of volunteers notifying them that we are moving toward electronic balloting, and that supplying their correct e-mail contact information will be critical to maintaining their eligibility to participate in future sponsor ballots.
   The move to electronic balloting will require both email capability, and access to the web to download drafts, to submit comments, and to vote. Require the ballot pool volunteers send their full contact information including email address in response to this note. (You can set this up by having them send the information electronically, which will facilitate your building a data base).
2. At the time of ballot pool formation for any LMSC vote, conduct the ballot pool formation electronically only. This way, all returns have guaranteed valid e-mail addresses at the time the pool is formed, and eliminates the requirement for the working group chairs to go through the additional address validation process.
3. In the invitation e-mail make it clear that no hard copy materials will be made available to anyone. Also make it clear that it is the responsibility of people that volunteer to participate to cast their vote (Approve / Do Not Approve / Abstain) in a timely manner, and that failure to cast their vote after volunteering is sufficient cause to remove their names from the overall 802 ballot pool.

4.7 Letter to UK RadioComs Agency – Hayes

(see file UK-RA.pdf)

Grow complains about the late delivery of voluminous information.

LMSC Motion: To submit doc.:99/263r1 to the UK-RA incorporating advice from counsel at no charge.

M: Hayes

S: Benson

Nikolich states concern that previously, we voted to send a letter to the FCC, and this turned out to be very contentious. Asks Hayes to summarize the contents of this letter.

Hayes summarizes contents of letter. ETSI board is going to study agreement with IEEE. UK RA has suggested another way to achieve coexistence between HIPERLAN and 802.11, which 802.11 supports.

Dennis Kuwahara speaks in support of Hayes' summary.

Carlo suggests that Hayes should withdraw this motion, and submit it later for SEC email ballot, with copy to IEEE staff.

Mover and Seconder agree to withdraw motion. Gerry Walker confirms that IEEE counsel can review this letter.

Motion withdrawn.

IEEE P802.11
Wireless LANs

Proposed Response to the UK-RA Consultation Document (99/245)

Date: 11/11/99

Author: **Ad Hoc Regulatory Study Group**

Abstract

Attached is a proposed reply for the UK-RA "Consultation Document, Short Range, High Data Rate, Nomadic Equipment operating in the frequency range 5.150 to 5.875 GHz." The document is meant to provide advice to the UK-RA, based on a request to Vic Hayes, chair of IEEE 802.11.

First, IEEE 802.11 would like to thank the Radio Agency for including us in your inquiry and allowing us to comment. These subjects are also very much on the minds of the IEEE 802.11 participants and the companies they represent.

IEEE 802.11 (ISO 8802.11) is an interoperability standard designed and desired to work worldwide. The IEEE 802.11a PHY (physical layer) specification is being developed as the wideband 5GHz addition to the 802.11 family. The 5.15GHz bands are very important to IEEE and represent an opportunity for high data rate and high bandwidth communications worldwide. The UK approval of IEEE 802.11 devices in the 5.15GHz bands is very important to this goal.

The IEEE 802.11 committee is examining the needed changes required in the 802.11 MAC in order to operate under European requirements.

In general, our interpretation of HIPERLAN0 at 5.15GHz is that it allows any number of proprietary implementations with minimal regard to coexistence and mutual interference, the only restriction being simple radio parameters (power spectral density and possibly channelization). Although the 802.11 committee has been pleased by the actions of many of the regulatory agencies, there are, in hindsight, some reservations about how the spectrum was allocated and regulated. For example, in the US, the Unlicensed National Information Infrastructure (UNII) frequencies are equivalent to HIPERLAN0 and allow both low and high bandwidth and low and high signalling rate devices to operate in the same spectrum. This approach potentially makes the spectrum less usable for the intended (broadband) application requirements. IEEE 802.11 would like to see appropriate coexistence requirements placed on future wideband spectrum allocations to ensure the spectrum is more useful for high quality, wide bandwidth, high signalling rate systems. So, IEEE 802.11 would recommend some restrictions on the use of all future wideband spectrum to exclude low data rate devices such as garage door openers, narrowband cordless phones, etc.

IEEE 802.11 is not a candidate for a HIPERLAN0 solution, however it is a complete interoperability standard that should be allowed to operate worldwide. Instead of a HIPERLAN0 solution, it is the opinion of the IEEE 802.11 committee that IEEE 802.11 should be an integral part of the UK's RLAN plans.

The questions Q1 through Q5 are copied directly out of your inquiry asking for IEEE 802 input:

Q1 *HIPERLAN Type 1 and HIPERLAN Type 2 are each open interoperability standards produced by representatives of manufacturing industry, application designers and potential users. It is currently Agency policy that RLANs in the bands 5.150-5.350 GHz and 5.470-5.725 GHz should be restricted to HIPERLAN equipment complying with the relevant ETSI specification. Is there a case for the development of a parallel co-existence standard (HIPERLAN Type 0?) based only on simple radio parameters to allow proprietary equipment to share the bands on a licence exempt basis?*

IEEE 802 feels that the 5GHz band is the only broadband spectrum available to the general public. Therefore, it should be preserved for broadband applications.

In considering the desired result of a general purpose high bandwidth wireless communications capability, there need to be some controls on the spectrum in order to preserve it for broadband applications. It cannot be totally unregulated; applications such as garage door openers at 5GHz would be a waste of this wideband spectrum. We think, as a minimum, coexistence parameters should be included to insure the broadband nature of the spectrum is maintained. There needs to be some support for collaborating/coexisting with the HIPERLAN1 and 2 and IEEE 802.11.

Q2 *If HIPERLAN Type 0 is not adopted by ETSI for European wide introduction is there a case for the UK to develop and introduce such a standard on a UK only basis?*

No, the success of the 5GHz bands is dependent on the availability of low cost radios. To have a UK-only solution would not allow competitive forces to work on a worldwide basis to reduce the cost of the hardware and services.

Q3: *Given the diversity of potential uses, what are the likely applications for these bands, what development issues remain unresolved, and when and how will services be introduced?*

What are the likely applications for these bands?

The likely end-user applications are all the high speed data office and home applications that we run on our wireline systems today. In addition, high quality voice and video can be delivered to the nomadic user via 5GHz broadband wireless.

What development issues remain unresolved?

Mobility and nomadicity across communications domains are still in a relatively primitive state that are being worked, but are not ready to be deployed yet.

When and how will services be introduced?

When the products are at the right price to be attractive to the appropriate segment of the population. The introduction of services by small service providers (entrepreneurs) will indicate that the market forces and public demand are adequate to encourage rapid business growth and fielding of niche markets.

Q4: *It is currently envisaged that HIPERLAN compliant services will be private system use only. Is there a requirement for public access systems in these bands, what kind of systems would be envisaged, and how should they be regulated?*

No, the public systems should be provided by other means (GSM, etc).

Q5: *Within the HIPERLAN family of standards, HIPERLAN Type 1 and HIPERLAN Type 2 systems are technically incompatible, therefore how best should these bands be assigned, given the aim of frequency assignment is to ensure that the maximum numbers of users get appropriate and fair access to spectrum for their applications? In considering this it should be borne in mind that these devices are likely to be incorporated into Recommendation 70-03 which will permit their movement across national borders and their licence exempt use across CEPT.*

This is the only broadband spectrum with public access, the low bandwidth applications should be excluded. The way to accomplish this is to place some restrictions on the spectrum use by low bandwidth applications.

The band should not be partitioned, so option 1, row 1 of the table of section 10.3 is the most acceptable solution for IEEE 802.11. See below:

1	*No partitioning of the bands.*	*All services co-exist on a licence exempt basis. No public access services are permitted*
2	*No partitioning of the bands.*	*All services co-exist on a licence exempt basis. Public and private systems are permitted to co-exist. However co-ordination and interference resolution is the responsibility of the operator and third party customers are not guaranteed access to spectrum at all times.*
3	*Bands are partitioned on the basis of public access/private system requirements.*	*Public access systems require licences and are co-ordinated. Private systems are licence exempt and uncoordinated.*
4	*Bands are partitioned on the basis of HIPERLAN Type 1 and 2 but not on public/private basis*	*All systems are licence exempt and uncoordinated.*

Of the broadband spectrum allocated, coexistence is critical for the wideband technologies. Because coexistence is critical, there should be a radio qualification scenario that meets the coexistence criteria.

Thank you for considering the IEEE 802 points of view in this matter.

4.8 Letter to FCC – Hayes

(see file 80211FCCletter.pdf)

LMSC Motion: To accept 99/265r1 as modified, and to submit to the FCC incorporating advice from IEEE counsel at no charge, subject to adjust the letter to show that the work was done by 802.11 with the voting results at level 802.11 and approved by the SEC.

M: Hayes

S: Heile

Nikolich points out that letter states that IEEE LMSC has taken a position, while in fact the conclusions stated in the letter are the work of 802.11, even a subset of members of the WG. Since 802.11 represents the body of subject material experts, the letter should identify the source of the contents as being the 802.11 WG.

Thompson wants to know how broad a review this received in 802.11. What was the size of the group that actually saw the analysis?

Approved 6/0/6 10:00 PM

IEEE P802.11
Wireless LANs

Proposed Reply Comments of IEEE 802 on FCC Docket 99-231 on Modifying the Rules for Spread Spectrum Devices

Date: November 10, 1999

Author: Regulatory Ad-Hoc Study Group of p802.11

Summary

Attached is a proposal for reply comments to the FCC NPRM in OET Docket 99-231. The document is a proposed reply referencing comments received by the FCC in the first phase of the proceding.

The text was generated by the 802.11 regulatory ad-hoc group, based on submissions and discussions held at the November 1999 802 meeting.

November 11, 1999

Magalie R. Salas, Esquire
Secretary
Federal Communications Commission
445 12th St. SW
Washington DC 20554

Re: Amendment of Part 15 of the Commission's Rules for Spread Spectrum Devices, ET Docket No. 99-231

Dear Ms. Salas:

The Local and Metropolitan Area Networks Standards Committee of the Institute of Electrical and Electronics Engineers (IEEE-LMSC) submitted comments opposing the proposed Part 15 rule changes to increase the maximum bandwidth allowed for frequency hopping devices in response to the Commission's Notice of Proposed Rulemaking regarding unlicensed spread spectrum devices. IEEE-LMSC agreed that the existing rules for direct sequence systems are adequate, with the additional requirement as proposed by the Commission that a processing gain calculation be included for systems which have fewer than 10 chips per symbol. IEEE-LMSC also advised the Commission of our concerns regarding the alternative Gaussian noise test as proposed.

IEEE-LMSC provided extensive analysis showing that the proposed rules change permitting wide bandwidth frequency hopping systems would result in increased interference to systems complying with the current rules even with the lowered power level restraints proposed. A number of commenters asserted that there would be no increase in interference[1] while a number agreed with IEEE LMSC that there would be an increase in interference[2]. Intersil and Nokia supplied analysis in addition to that of the IEEE-LMSC showing increased interference. There was no analysis presented supporting the claim that the proposal would not increase interference.

[1] See for example, the comments of Proxim at C, HomeRF at 3 and Breezecom at 5.
[2] See for example, the comments of Nokia at II, Intersil comments of September 3, 1999 and Aironet at 3.

Most commenters agreed that the CW jammer test requirement was sufficient to qualify direct sequence systems. However, some commenters proposed that only a gaussian noise qualification test is sufficient for direct sequence systems with fewer than 10 chips per symbol[3]. The commenters in favor of such a test did not address the complexities that IEEE-LMSC described. IEEE LMSC continues to assert that the CW jammer test provides sufficient assurance that a direct sequence system meets the spreading rules indicated by the calculation and declaration. IEEE-LMSC believes that the proposed alternative Gaussian noise jamming test should be excluded, until a detailed test procedure specifically designed for evaluating processing gain is developed. Inclusion of this test even as an option without an accompanying test procedure invites inaccurate and widely variable test results.

In summary the IEEE-LMSC found no comments which effectively disputed it's claim of increased interference if wideband frequency hopping is permitted, nor any compelling evidence that the CW jammer test in conjunction with a mathametical declaration was insufficient for demonstrating direct sequence processing gain. The IEEE-LMSC thus urges the Commission to reject the proposed increase in frequency hopping bandwidth and not to impose the gaussian noise test requirement on direct sequence systems.

Respectfully,

James T. Carlo (jcarlo@ti.com)
Chair, IEEE 802 LAN/MAN Standards
Texas Instruments
9208 Heatherdale Drive
Dallas TX 75234

Vic Hayes (vichayes@lucent.com)
Chair, IEEE 802.11, Wireless LANs
Lucent Technology
Zadelstede 1-10
3431 JZ Nieuwegein, the Netherlands

cc:

Chairman William E. Kennard
Commissioner Susan Ness
Commissioner Harold Furchtgott-Roth
Commissioner Michael K. Powell
Commissioner Gloria Tristani
Dale Hatfield

Julius P. Knapp
Neal L. McNeil
Karen Rackley
John A. Reed
Anthony Serafin

[3] See the comments of Aironet at 5 and Proxim at 6.

4.9 Recommendation to start the Trademark process for WPAN and WPANs - Heile

LMSC Motion: Authorize securing domain names related to WPAN.org

M: Heile

S: Marks

Approved 10/0/0 8:15 pm

4.10 ITU – 802 Participation Carlo

LMSC Motion: Adopt the following as the ITU Submission Process for IEEE 802

Any document given over to a Company or Country for submission to ITU by an IEEE LMSC subgroup shall have a footnote of the following form at the bottom of the cover page.

> **This document represents the technical position of the IEEE 802.3 CSMA/CD Working Group by a vote of 24-Approve, 10-Disapprove and 4-Abstain.**

In order to use the statement above:

a. Working Group or Task Force shall approve the document

b. SEC must vote to approve

c. In dire circumstances, the SEC chair will approve letters where delays would be destructive to the standards process.

M: Hayes

S: Love

Approved 10/0/2 8:30 pm

Any informal memos or letters sent from a Working Group Chair to an ITU Rapporteur as an administrative liaison comment can be directly from the chair of the Working Group to the Rapporteur.

Process:

The SEC Chair approves and is copied within the letter or email.

SEC is copied on the letter via a separate EMAIL

4.11 Letter to ITU-R Rapporteur on Radio LAN –Hayes

(see file 5GigCoexistLetter.pdf)

LMSC Motion: To endorse a letter to ITU-R SG8a/9b sent by Boeing through an appropriate administration, incorporating advice from IEEE counsel at no change. The footnote discussed earlier will be appended.

M: Hayes

S: Rigsbee

Marks: Change references to IEEE as an “international organization” to “transnational organization”.

Kurahawa: This letter will be submitted by Boeing, as a member of ITU.

Nikolich: The letter makes too many references to the contents as being an IEEE position.

Carlo asks that motion be withdrawn, that letter be redrafted and submitted for SEC email ballot.

Hayes and Rigsbee agree.

Motion withdrawn.

IEEE P802.11
Wireless LANs

Draft Letter for 5 GHz Coexistence

Date: November 1999

Author: IEEE p802.11 Regulatory AD-Hoc Group

5.15GHz Worldwide

Introduction

There are major innovations and changes occurring in the wireless industry that have worldwide implications. Wireless is being accepted as the major direction and innovative technology required for Internet telephony. The Internet telephony step is really just the first step toward instant and constant access to information "at your fingertips." What is of even more value than Internet telephony, however, is the ability to do everything you do at the desk or the kitchen counter with a portable computing device. Bandwidth and reliability over wireless links has always been the biggest drawback to this possibility. The coming necessity of Internet connectivity will drive more bandwidth and more reliable content into the products that enable people to do whatever they do from wherever they are. The 5GHz (by 5GHz bands we mean the 5.15GHz UNII, Europe's 5.2 GHz HIPERLAN1 and HIPERLAN2, and Japan's 5.15GHz 100MHz) spectrum bands are the next major step in allowing this innovation to occur. Major political entities in the world have allocated these bands for use, but there is not a consensus on how they should be utilized worldwide. The IEEE 802 recommends that the 5GHz band is the next band that should be implemented worldwide and that it should be unlicensed and allocated by the World Radio Congress (WRC).

IEEE is an international organization

The IEEE is an international nonprofit organization of electrical engineers that sets standards for the electrical and telecommunications industries. IEEE has brought standardization to communications wiring and protocols in Ethernet (IEEE 802.3) and is presently working on standardizing a ten gigabit version of Ethernet. IEEE is also working on wireless communications standards and in 1997 published the IEEE 802.11 standard for wireless Local Area Networks (LANs). In September of 1999, a wireless LAN standard was published for the 5GHz spectrum called IEEE 802.11a. This standard is a wireless LAN standard and therefore is meant to be a wireless extension of the wired Ethernet LANs that have been implemented throughout the world. Unlike the wired communications industry, wireless frequencies are regulated by administrations throughout the world. In light of this regulation, international requirements are not addressed except by international entities like the UN and the WRC. The leap that the IEEE and many international companies would like to make is to move into a wireless regime in which international requirements are addressed and a conclusion or consensus reached as to use of license exempt 5GHz radios worldwide.

5GHz standard

The 5GHz IEEE standard was developed for the high bandwidth wireless requirements. Adding bandwidth to communications media has been a trademark of the IEEE in its history. The moves from 10Mbps Ethernet to 100Mbps Ethernet to 1Gbps Ethernet to 10Gbps Ethernet is an example of the tradition. As with the wired standards, the wireless standards also provide the protocols at the physical (PHY) and Medium Access Control (MAC) layers to enable the communications to occur. The 5GHz standard was foreseen as a requirement by high technology companies who need to deliver high bandwidth

applications to mobile and portable devices that increase the productivity of individuals in their work and play.

IEEE 802 interest in using 5GHz worldwide

IEEE 802, in addition to its members, has an interest in encouraging the growth and development of these high bandwidth applications and services in the 5GHz bands. In order to meet the requirement that these standards be available worldwide, the question of radio spectrum allocation is one that must be addressed. There is a precedent; the 2.4GHz worldwide allocation of unlicensed frequency that was provided in an international setting in 1990. This worldwide allocation of bandwidth for unlicensed use created innovation and growth beyond the wildest dreams of the individual countries proposing it in that timeframe. Today, 2.4GHz is widely used spectrum on a global scale. There are lessons to be learned from 902 MHz and the 2.4GHz experience. To summarize, unlicensed data communications are too far down the primacy ladder, and there is too little free spectrum for wideband high speed data transmission. In addition, many countries did not fully implement the unlicensed bands. There are countries that did not implement the full band and thereby have drastically reduced the usefulness of the band. Necessary provisions for license exempt data communications will be discussed in detail in the following paragraphs.

Arguments For License Exempt 5GHz Worldwide

This section of the document lays out the background of and the arguments for designating the 5GHz bands as unlicensed worldwide.

Major areas of the world have allocated 5GHz bands

To start off, there are four major areas of the world that have co-allocated license exempt 5GHz spectrum already. These spectra

are cooperative within each area, but not necessarily internationally. The four areas are: US, Canada, Europe, and Japan (soon).

US (and Canada) – UNII

In the US, the Unlicensed National Information Infrastructure (UNII) spectrum was allocated in 1997. This allocation of unlicensed frequencies was meant to allow innovation and use by the largest possible number of US citizens, including indoor LAN as well as rural and remote radio connectivity to alleviate the high cost of connecting its citizens to telecommunications via hardwire. The lower and middle bands are useful for short distance LAN applications. The upper band of the UNII designation permits a 4 Watt outdoor allocation to connect to remote schools, libraries, ranches and farms without the high cost of connecting them via wire.

Europe – HIPERLAN

In Europe in the early 1990s, the CEPT and the European Commission allocated spectrum for Wireless LAN connectivity called HIPERLAN1. The spectrum was co-allocated to this purpose in Europe, so the specification developed by the European Telecommunications Standards Institute (ETSI), did not require terrestrial coexistence and therefore was not designed to be tolerant of interference nor the presence of other radio devices in the same spectrum.

HIPERLAN2, on the other hand, was meant to be a broadband access method and, up until several months ago, did not have a spectrum allocation. Within the last three months, the CEPT announced that HIPERLAN2 would be allocated (5.25-5.35GHz and 5.47-5.725GHz) as the broadband allocation for Europe. So, the European spectrum allocation is even broader than the US spectrum.

Japan – 100MHz

Japan will soon also co-allocate the 5.15-5.25GHz band as an unlicensed band. They are in the midst of attempting to expand the band, as the US and Europe have already done.

5 GHz Frequency Allocation in Major Regions of the World

Our conclusion is that the 5GHz bands are already in a position to be co-allocated for unlicensed use worldwide. The subject needs to be brought in front of the US, Europe, and Japan radio agencies and proposed that they be unlicensed worldwide. The World Radio Conference (WRC) is the next step in moving toward recognition that these frequencies be advanced to the status of license exemptworldwide.

Cooperative Efforts by the Standards Organizations

In working on specifications for the same frequencies, ETSI and the IEEE have worked together to prepare for mutual use of the 5GHz bands. They have a common Physical Media Dependency (PMD) layer that is the radio and have chosen a common OFDM scheme that opens the possibility of software radios that can use the same PMD layer. Therefore some work has already gone into enabling radio manufacturers to travel across international borders, using software in the radio to enable a switch between the UNII and the HIPERLAN2 modes of operation.

Opening up the 5GHz bands as license exempt worldwide frequencies will enable the standards to further innovation and use of the band by citizens world wide.

License Exempt 2.4GHz band has been a phenomenal success

There is a precedent to open up the 5.15GHz bands to unlicensed use worldwide: the 2.4GHz worldwide band.

Junk band innovation

To its detriment, the 2.4GHz band has become known as a "junk" band in which there are countless devices with a myriad of technologies attempting to capture lots of markets. This has contributed to the reluctance by many to rely on a radio band that could be interfered with at any time by a baby monitor or garage door opener. However, in spite of the 2.4GHz band being designated as an Industrial, Scientific, and Medical (ISM) band with many non-communications applications such as microwave lighting and microwave ovens, the band has been very successful in surviving these interference onslaughts. The reason it does well is because packet data communications is adaptive and can fit in-between the interfering signals. This does not work well for real-time wideband information transfers.

Cordless telephones

Lots of cordless phones are now moving to the 2.4GHz band and, possibly they will move to the 5GHz bands as well. When they move to 5GHz will be a function of how fast the prices for the chip sets move down.

Baby monitors

Another example of an application that will move to whatever cheap unlicensed frequencies are available are baby monitors. There are so many applications like this that we can assume a continuing movement of these applications to any available unlicensed frequencies if they are allowed.

Too Narrow

The 2.4GHz band is too narrow to accomodate major high bandwith applications like video and interactive three dimension CAD drawings.

Innovation

On the positive side, unlicensed 2.4GHz has created enormous innovation. Any idea an entrepreneur comes up with has an outlet through use of unlicensed radio. Therefore, the innovation side of wireless has taken off because of the 2.4GHz band and there is no end in sight to that innovation.

Encourages economic growth

There have been entire industries started based on these unlicensed bands and many more are going to be proliferated with the advent of more and larger bandwidth unlicensed bands. This is encouraged by having economies-of-scale from frequencies being allocated worldwide rather than regionalized.

Having Common Unlicensed Bands Worldwide facilitates international travel

The world and its companies are becoming more international all the time. Boeing is an example of a company that manufactures aircraft tails in Australia and fuselage parts in Japan. The need to move communications capabilities seamlessly across borders becomes a major business driver for efficiency and innovation.

Promotes high bandwidth applications

Common unlicensed bands also allow the easy migration and movement of high bandwidth applications such as delivery of streaming video and interactive three dimensional CAD.

Facilitates innovation in frequency use

Boeing, for example, has a strategic goal to engineer, design, and build anywhere on earth. To accomplish this requires instant and adaptive communications anywhere. Historically, the use of unlicensed frequencies has led to innovative ways to get more high speed data throughput using the assigned and available unlicensed spectrum.

Technologies are moving toward new radio technologies

In addition to the existing technologies for radio use, like spread spectrum (FH and DS), there are more technologies coming that will challenge the traditional radio capabilities. This section describes some of those:

Pulse radio

The company Time-Domain Inc. has some patents and has advocated a move toward pulse radio. Basically, pulse is like radar in that information is sent out in pulses. In the case of pulse radio, each pulse encodes information and therefore is like a digital morse code. This technology operates in the noise floor and is purported to be non-interfering to traditional narrowband and broadband technologies.

Removing radio heterodyne complexity

Another technology that may prove to be a major driver in the development of new radio technology is the reduction of the electronics used in the radio front end (direct to baseband). This technology may reduce the overall cost of the radio and drive the radios into commodity pricing.

New technologies yet to come

With all these new technologies showing up, who knows what innovations will come out as the business opportunities present themselves to utilize the wider bandwidth.

Arguments against license exempt 5GHz worldwide

This band will interfere with the MSS services

The 5.15-5.25GHz band is currently co-allocated to MSS satellite services. There is currently an aggregate power limitation of 10Watts/MHz within the footprint of an MSS satellite. This limitation is currently in place in the US and the

ITU-R 8A/9B is currently considering this limitation to be implemented worldwide.

Unlicensing Frequencies turns them into junk bands

The argument that making the 5.15GHz frequencies unlicensed will turn them into junk bands will only come true if there are no limitations on the use of low bandwidth applications in the band. By simple exclusion of low bandwidth applications, which could easily be accommodated in other unlicensed bands, the 5.15GHz frequencies could be preserved for the applications that require high bandwidth.

National entities should control and protect their frequencies

When limitations are imposed that require a national or regional wireless frequency plan, the costs of radio technologies never go below the threshold which makes a technology a commodity. The economies of scale are maximized when they are worldwide.

Protective policies preserve industry for national and local entities

While it is true that such policies might protect an industry in the short term, in the long term, the industry will be passed by because of technology innovation and be hurt in the long run.

5GHz won't be the last potential worldwide candidate

Historically, the radio technologies have moved from crystal-based narrowband through spread spectrum to noise floor code division across more and more radio frequencies. The next generation of license exempt wireless will be some other band above 5GHz. This next generation will face the same worldwide candidacy issues that 5GHz faces. However, the technologies for the next several years are best served by the

5GHz frequencies and their uses and it is the most cost effective technology to implement today.

US and Europe – regulatory philosophies

There are competing, as well as somewhat complementary, philosophies within the US and European regulatory areas with regard to the approaches to unlicensed frequency allocation.

UNII in US

The philosophy in the US is that anyone can operate in the band as long as they meet some elementary radio parameters, such as power spectral density and out-of-band emissions. The regulatory agency in the US wants to encourage innovation and technological advances.

HIPERLAN in Europe

The philosophy in Europe is that there will be one interoperability standard and therefore there will not be competing radio interference.

IEEE Position

The need is to develop communications standards that foster coexistence and maximize the benefit to users of the spectrum. Coexistence requirements are necessary to assure that the 5GHz band is available for wideband, high data rate applications. On the other hand, the European approach should be relaxed somewhat and allow for other systems, based on consensus standards, to cooperate in the same frequency space. Other high bandwidth and high signaling rate consensus standards, such as IEEE 802.11 should be allowed. IEEE is continuing to pursue collaboration and cooperation talks with ETSI to reach such an agreement.

2.4GHz not really worldwide

The regulations for the 2.4GHz band are not consistent worldwide even though the spectrum segment is touted as a worldwide band. Some countries have reduced spectrum allocations, power levels, out-of-band requirements, and thereby cause protocol problems. This situation fosters the possibility that illegal radio operations can inadvertently occur without the knowledge of the users or of the countries involved. This situation should be ameliorated in the 5GHz worldwide frequency space.

Conclusion

License exempt 5GHz worldwide operation is possible

A 5GHz worldwide unlicensed allocation is possible and wanted by all. It can also be preserved as an appropriate spectrum for wideband applications with some coexistence criteria development.

License exempt spectrum promotes economic growth and innovation

The unlicensing of the 5.15GHz band worldwide will accomplish the same economic growth and innovation that unlicensed 2.4GHz worldwide spectrum has created. In addition, it will promote innovation in wideband high data rate applications and services.

International companies need worldwide license exempt frequencies to flourish

International companies need to be able to operate on the same frequencies worldwide without the problems of dealing with national regulatory issues.

US should support license exempt 5GHz worldwide

The US is in a position to support license exempt 5GHz worldwide and to show leadership in advocating the deployment of these frequencies worldwide. The IEEE, an international organization chartered in the US, has worldwide membership. The IEEE represents an international community and may be considered to be not-country-specific or national in nature. The US government, on the other hand, must represent the companies and individuals within its borders and, altruistically, must look to the mutual benefit of all its citizens. As the world becomes more international, this emphasis must extend to companies and individuals worldwide. Therefore, the support for such a worldwide allocation should be considered a priority.

4.12 802.5v Gigabit TR to LMSC Sponsor Ballot – Love

LMSC Motion: Approve forwarding of 802.5v (Gigabit Token Ring) to LMSC Sponsor Ballot

M: Love

S: Lidinsky

Approved 7/1/3 8:44 PM

4.13 802.5w Corrigenda to RevCom-Conditional Approval – Love

LMSC Motion: Conditionally approve forwarding of 802.5w (TR Corrigenda) to RevCom for publication following the successful recirculation ballot

M: Love

S: Lidinsky

Approved 10/0/2 8:47 pm

4.15 Letter Regarding IPF - Carlo

Carlo presents draft of letter.

Nikolich would like to reduce the payments made in 2000. Marks says that we should remove the word "obligation" from the third paragraph. Carlson and Grow suggest changing the last sentence of the third paragraph to read "These will be the last payments from IEEE 802."

Total IPF payments for 1999 and 2000 will be $146,000. Of this, ~$79,400 has already been paid. The remaining $66,600 will be paid in three installments of $22,200.

LMSC Motion: Complete IPF fee payments to total $146,000 in 1999 and 2000. No payments thereafter.

M: Rigsbee

L: Lidinsky

Approved 11/1/0 9:20 PM

4.16 IEEE 802 Stds Availability

Carlo reviews IEEE 802 Standards Availability Principles. Will work with IEEE Staff in pursuit of goal to make standards available on the WWW, without any encumbrances, to all parties, World Wide.

4.17 Rules Change proposal to letter ballot - Lidinsky

Lidinsky asks for a straw poll to assess the level of support for the proposed rule change before asking for motion to go to ballot. Straw poll was 8 to 2 in favor.

LMSC Motion: P802 SEC resolves to submit changes to the Operating rules for the following sections to SEC electronic letter ballot: 5.1.4.1, 5.1.4.2, 3.6.1, 5.1.3.4.

M: Lidinsky

S: Nikolich

Lidinsky proposes yet another definition for a Technical Issue, SEC agrees that the latest definition should be the subject of the ballot.

Approved 11/0/0 10:23 PM

4.18 Extension of MAC Enhancements Study Group - Hayes

(see file dot11MACSG.pdf)

John Fakatselis, the chairman of the 802.11 MAC Enhancements Study Group, recaps work of SG at this meeting. The SG requests an extension of the SG to March of 2000. SG was originally chartered in July of 1999. SG expects to complete its work by March 2000.

LMSC Motion: To approve the extension of the MAC Enhancement SG until the March 2000 plenary

M: Hayes

S: Benson

Approved 11/0/0 10:30 PM

Study Group Enhanced MAC

Nov. 11, 1999

John Fakatselis reported that the PAR draft has been completed. He brought forward several motions that were approved by the SG.

Motion 99/59P18	(144) To request extension of the MAC enhancement SG until March 2000 Plenary
Moved:	John Fakatselis for SG

Discussion: none

Motion passes: 27-0-0

Motion 99/59P18	(146) To approve MAC enhancements PAR and send to SEC and then to NesCOM.
Moved:	Bob O'Hara
Seconded:	Tim Godfrey

.

Motion passes: 22-1-4

Motion 99/59P18	(149) To approve the IAPP PAR and forward to SEC and then to NesCOM.
Moved:	John Fakatselis for SG

Motion passes: 22-0-6

Motion :	To request extension of the MAC enhancement SG until March 2000 Plenary

MAC ENHANCEMENTS STUDY GROUP SUMMARY REPORT
NOV. 08-NOV11, 1999 KAUAI,HI

The Mac Enhancements study group approved the Draft for two PARs. These drafts will be submitted for approval to EXCOM which is expected at the March 2000 plenary meeting. The scope and purpose of the two PARs is as follows:

PAR 1 (MAC Enhancements):

Scope of Proposed Project (What is being done including the technical boundaries of the project?)

[Enhance the 802.11 Medium Access Control (MAC) to improve and manage Quality of Service, provide classes of service, and enhanced security and authentication mechanisms. Consider efficiency enhancements in the areas of the Distributed Coordination Function (DCF) and Point Coordination Function (PCF)]

Purpose of Proposed Project [Why is it being done, including the intended user(s) and benefits to that user(s)]

[To enhance the current 802.11 MAC to expand support for applications with Quality of Service requirements. Provide improvements in security, and in the capabilities and efficiency of the protocol. These enhancements, in combination with recent improvements in PHY capabilities from 802.11a and 802.11b, will increase overall system performance, and expand the application space for 802.11]

PAR 2 (IAAP):

Scope of Proposed Project (What is being done including the technical boundaries of the project?)

To develop recommended practices for an Inter-Access Point Protocol (IAPP) which provides the necessary capabilities to achieve multi-vendor Access Point interoperability across a Distribution System supporting IEEE P802.11 Wireless LAN Links. This IAPP will be developed for the following environment(s):

1) A Distribution System consisting of IEEE 802 LAN components supporting an IETF IP environment.
2) Others as deemed appropriate

This Recommended Practices Document shall support the IEEE P802.11 standard revision(s) <fill in official title of docs>

Purpose of Proposed Project [Why is it being done, including the intended user(s) and benefits to that user(s)]

IEEE P802.11 specifies the MAC and PHY layers of a Wireless LAN system and includes the basic architecture of such systems, including the concepts of Access Points and Distribution Systems. Implementation of these concepts where purposely not defined by P802.11 because there are many ways to create a Wireless LAN system. Additionally many of the possible implementation approaches involve concepts from higher network layers. While this leaves great flexibility in Distributions System and Access Point functional design, the associated cost is that physical Access Point devices from different vendors are unlikely to inter-operate across a Distribution System due to the different approaches taken to Distribution System design.

As P802.11 based systems have grown in popularity, this limitation has become an impediment to WLAN market growth. At the same time it has become clear that there are a small number of Distribution System environments that comprise the bulk of the commercial WLAN system installations.

This project proposes to specify the necessary information that needs to be exchanged between Access Points to support the P802.11 DS functions. The information exchanges required will be specified for, one or more Distribution Systems; in a manner sufficient to enable the implementation of Distribution Systems containing Access Points from different vendors which adhere to the recommended practices.

Next Meeting

For the January 2000 meeting the Study Group will begin to review technical submissions and will start developing the requirements document for the enhancements, to be used by the Task Group upon its approval.

The papers that have been presented thus far addressed enhancements in the areas of: QOS, COS, security, authentication, DCF / PCF improvements, proprietary extension provisions, Load Balancing, Dynamic Frequency allocation, TX power and Inter Access Point Protocol.
These areas will constitute the ground for initial technical discussions upon approval of the Task Group.

4.19 Status and Affirmation of 802.14 Shutdown Plan – Nikolich

(see file dot14friplen.pdf)

Mathew Sherman, chairman of 802.14, presents status and plans for winding down the group.

Unanimous votes to withdraw 802.14 and 802.14a PARs.

Presents a plan of work to conduct a orderly shutdown.

Grow asks why group can't go into hibernation. Carlo asks that the Vice chair has study whether group should be disbanded or hibernated.

Sherman presents letter to David Fellows, DOCSIS Certification Board Chair. Minor edits to letter.

LMSC Motion: To submit letter to SCTE indicating wind-down of 802.14

M: Nikolich

S: Love

Approved 11/0/1 10:40 PM

802.14 / 802.14a Ballot results

- 802.14
  - Voters: 37 Returns out of 50 Voting Members
    - 74 % Return rate > 50% Threshold
  - Approve 36 / Do Not Approve 0 / Abstain 1
  - Unanimous 100% Approval with some comments
- 802.14a
  - Voters: 38 Returns out of 50 Voting Members
    - 76 % Return rate > 50% Threshold
  - Approve 37 / Do Not Approve 0 / Abstain 1
  - Unanimous 100% Approval with some comments

Withdraw Ballot Comment Summary

- Recommendations on disband / hibernate
- Questions on what will happen to 802.14 ftp site, web site, reflector
- Questions about maintaining a group of experts
- Addition of comments to 802.14a draft
- Posting of DOCSIS 1.1 presentation material
- Comments concerning general views and opinions

802.14 Action Plan

CLEAN UP SHOP!

- Recommend leaving PARs in place till March when cleanup completed!
- Apprise SCTE, ATM Forum and DAVIC of 802.14 Decisions and Status
- Resolve remaining withdrawal ballot comments
- Create 802.14 IEEE web page (tombstone)
- Do web page with pointers to key files and 802.14 Historian (Robert).
  - 802.14 draft
  - 802.14a draft with comments
- Notice to everyone that WalkingDog will go away in March and any remaining information will be on the IEEE.ORG site as warranted.
  - Folks can download data they desire on their own
- Burn a few CD ROMs to completely archive WalkingDog contents for key individuals
- Robert Russell will remain on as Point of Contact and assemble contact information of all those desiring to be kept in contact with.

David Fellows
DOCSIS Certification Board Chair
Cable Television Laboratories
400 Centennial Parkway
Louisville, Co 80027-1266

Dear David,

In response to your letter of Sept.8, 1999 to Robert Russell and Roger Durand, as well subsequent discussions since then, the 802.14 working group has come to the conclusion that no further development work remains to be done for 802.14 in the area of Cable TV PHY/MAC. Accordingly, a ballot has been held and passed on to withdraw the 802.14 and 802.14a PARs. This recommendation has been passed to the 802 Executive Committee. The executive committee and 802.14 leadership have jointly decided that there is still cleanup work to be done in terms of “mothballing” the current drafts, and material on the 802.14 and 802.14a FTP sites. The 802 Executive Committee has therefore decided to defer action on the status of the 802.14 and 802.14a PAR’s until the next meeting of the 802 Executive Committee (March 2000). At that time the PARs will be submitted for withdrawal, and the 802.14/14a Working Groups will do no further development work in the area of Cable TV MAC/PHY, although other new work may be pursued.

Sincerely,

Jim Carlo
Chair 802 Executive Committee

4.20 802.15 High Rate WPAN Study Group Formation – Heile

Bob Heile introduces Jim Allen from Kodak. Jim reviews Study Group proposal.

LMSC Motion: To approve the formation of a study group within 802.15 to develop a PAR, for submission to the SEC by the March 2000 Plenary, on a High Rate WPAN that will have a fall back mode fully compliant with the proposed Task Group 1 draft standard.

M: Heile

S: Lidinsky

Hayes speaks against the motion. States that 802.11 already has a high rate WLAN. Too much work for 802.15.

Grow states that the SG must prove (via the 5 Criteria) that there is a market and that there is distinct identity.

Frazier asks how many people expressed interest in the study group. Heile answered 30.

Approved 11/1/0 10:52 PM

4.21 LCD Projector Use Guidelines - Rigsbee

Rigsbee presents LCD Projector Use Guidelines.

LMSC Motion: To accept Projector/Printer Use Guidelines as form for Use Request. To be effective immediately, and added to Chair's guidelines.

M: Rigsbee

S: Grow

Approved 12/0/0 11:00 PM

4.22 802.16 Study Group (sub 10 GigaHerz) - Marks

LMSC Motion: To create an 802.16 Working Group Study Group (WGSG) to investigate establishing air interface specifications for fixed point to multi-point Broadband Wireless Access systems operating in frequency bands below 10 GHz.

M: Marks

S: Nikolich

Thompson asks, why another project when 802.16 is so early in its history?

Marks answers that there has always been interest in operating below 10 GHz. Several potential technologies being investigated.

The Study Group chair will be Brian Kiernan.

26 people expressed interest in participating in the SG

Approved 12/0/0 11:07 PM.

4.23 Party like its Y2K - Carlo

Rigsbee, Carlo, Steve Carlson on the party committee.

Grow wants no pins

4.24 Plenary Schedule Feedback - Carlo

Very positive feedback from 802.3 and 802.1, and 802.11.

We will stick with this schedule for the future.

4.25 Future meeting venues – Rigsbee

QE hotel in Montreal has upped it's fees above what they had been quoting.

LMSC Motion: To approve 802 Exec Secy to finalize contract with Hyatt Regency Kauai for Nov 2002 Plenary. Costs for such meeting to not exceed cost for this meeting by > 10%. (basic cost of living for 3 years)

M: Rigsbee

S: Carlson

Hayes: 802.11 was very happy with this venue, would like to come back for each plenary.

Approved 9/3/0 11:21 PM

4.26 Network Support Update – Kerry

(see file thunetworkupdate.pdf)

IEEE 802
Networking in Meetings
Update on Discussions

Kauai, HI – November 11th, 1999

ExCom Meeting

The Issues at Hand

- a) applications
- b) the network requirements
- c) responsibilities, and liabilities
- d) the provision of equipment & for who?
- e) insurance
- f) maintenance, and configuration, plus user support
- g) issuance of equipment, advertising the fact to users for sign-up
- h) what the sponsor gets out of it, or indeed does not, and the limitations

Conclusion

- Go with a simple network & applications at first
  - File Sharing / Electronic Circulation via FTP, Windows Explorer, or Browser
  - Print Server
  - Accounting / Concentric Databases at a later date
  - ExCom room with wired 24 port hub, plus walk-up 24 port hub station in the office for general membership
  - IEEE 802 provided Server & Software
  - Cabletron Wireless Network still available for “Membership Guinea Pigs ONLY”
  - Network & Application Support is a must
  - IEEE 802 issues pertaining to Sponsorship Unclear

The Applications Considered

- File Sharing / Electronic Circulation
- Internet Connection
- Print Server
- Email (Intranet / Internet)
- Centralized LCD Projection File Database
- Accounting / Concentric Databases
- Registration / eCommerce
  - All Leading too a Reduction of Printed Material, and a Decrease of Workload

Recommendation

- Direct the Networking Sub-Committee to provide a proposal of resources, equipment requirements, and costs.
  - Determine, if any volunteers are willing to support the infrastructure, before and during the meeting. Or for IEEE 802 to provide sufficient funds to cover this activity.
  - The outcome of the proposal to be presented, either via email reflector, or at the next meeting, at the discretion of the ExCom membership

Back-Up Material

The Network Requirements

- Who, What , Where, and When
  - Network Infrastructure
    - Wired and Wireless Elements with Walk-Up Hubs &/or Flash Cards
    - Timing of Implementation
    - Coverage Area and USE, including Expandability
    - Sponsorship, Purchase, Buy?
      - Cabletron has offered a Wireless Network with open-ended timeframe (7AP's / 75 PC Cards)
      - Wired Network sponsor required
    - What IEEE & IEEE 802 can provide and maintain

Who Needs It? – "A First Cut!"

Dot	Ex	OF	1	3	5	8	11	14	15	16
Wired	X	X	X	X	X	?		?		X
Wireless	X					?	X	?	X	X
Utilize	HI	HI	M/ HI	HI	LO	?	HI	?	HI	HI
#Users	15	8	10	24	4	?	35	?	15	25

Responsibilities, and Liabilities

- On the Sponsor
- IEEE 802 Group / Organization
- The User
- Damage Control or Errors
  - Host Device, System, or Applications

The Provision of the Equipment

- for who?
  - All Groups
  - ExCom and Wireless Groups
  - Staged Role-Out for Each Group
- the installation
- the storage
- the transportation
- an external connection (Dial-Up, ISDN, DSL, etc.)

Insurance

- Provided by Who ?
- Where ?
- And When ?

Maintenance, and Configuration

- User Support
- Network Support
  - Infrastructure
  - Server(s)
  - Printers
- By Who?
  - Required time
- Installation and Tear-Down

Issuance of Equipment

- Advertising the fact to users for sign-up
- Purchase or Rent?
- Reimbursement for Loss, from User
  - Credit Card Guarantee
  - Chase up for Payment, by who?
- Or a Revolutionary Idea!
  - Overnight Upload to Web Site
    - Member Downloads Material

What the Sponsor gets out of it?

- "or indeed does not"
  - Sponsor Positions
  - IEEE Position
  - Kudos or Freebie?
  - The limitations

4.27 Withdraw of 802.1r (GPRP) –Lidinsky

The conclusion of the WG is that there is no reasonable way to resolve the comments that have been made on the document and that the only reasonable course of action is to withdraw the PAR.

4.28 IETF Joint Projects – Lidinsky

Regarding SRP, will sponsor tutorial in March.

4.29 March 2000 Elections -Carlo

Carlo reviews the March 2000 Election Process

4.30 Cookie Motion -Marks

Marks reads cookie request.

802.16 Motion: To request 802 to provide cookies at the afternoon break on 4 days at the next plenary.

4.31 802.3 Liaison Letters -Thompson

Thompson reviews liaison letters to 1394 and TIA TR-42/ ISO/IEC SC25/WG3, and ITU-T, and another to SC25/WG3

(see file ITU-LiaLetter.pdf)

LMSC Motion Approve liaison letter to TR 42 and SC25 WG3

M: Thompson
S: Love

Approved 11/0/1 11:40 PM

LMSC Motion: Approve liaison letter to SC25 WG3 regarding cabling

M: Thompson
S: Love

Approve 12/0/0 11:44 PM

LMSC Motion: Submit letter regarding unallocated margin in 802.3z to TIA TR41-1 and TR41-2.

M: Thompson
S: Love

Approved 10/0/1 11:50 PM

IEEE 802.3

Geoff Thompson, Chair

November 11, 1999

TO: Stephen J. Trowbridge <sjtrowbridge@lucent.com>
Gilles Joncour <gilles.joncour@cnet.francetelecom.fr>
Subject: Informational Advisement of a Future Request re Ethernet

Gentlemen:

The IEEE 802.3 Working Group is in the process of formally initiating a project that will include formatting at the physical layer for transmission through the framed wide area infrastructure at 10 Gb/s. It is expected that this will require the allocation of a signal label (C2 byte) code point from ITU-T but we are not at that stage of the project yet. We do understand that due to the timing of ITU-T meetings that having a formal request in place in time for their April 2000 meeting is appropriate if we wish a formal value within the next 2 years.

This letter is to advise you that we expect to make such a formal request out of our Plenary meeting to be held in Albuquerque, NM during March 6-10, 2000. The HSSG (Higher Speed Study Group) and its expected successor, the 10 Gigabit Ethernet Task Force (P802.3ae) is meeting in Kauai, HI November 8-11, in Dallas TX during the week of Jan 17, 2000 and in Albuquerque, NM March 6-10, 2000. For further information please see the IEEE 802.3 web page at: http://grouper.ieee.org/groups/802/3/index.html

Specifically, the HSSG is a Study Group, operating under the IEEE 802.3 Working Group. HSSG has the charter to pursue a project to extend the IEEE 802.3 Standard to 10 Gigabit per second operation. The HSSG has adopted an objective to define two physical interfaces (PHY) for 802.3 Ethernet at or about 10 Gigabit per second (10Gb) data rate. One of the physical interfaces is a Wide Area Network compatible PHY at a data rate which is compatible with the payload rate of OC-192c/SDH VC-4-64c. It is intended that this PHY will operate as a Path tributary to 10Gb or higher digital SONET, SDH, or WDM transmission systems. This PHY will provide for 802.3 Ethernet MAC frames to be mapped directly into the path payload envelope without alteration.

We expect to have an authorized project and be sufficiently far along in the definition stage to be able to make our formal request for allocation of a signal label (C2 byte) code point by the completion of the March, 2000 meeting. If there is any groundwork that needs to be laid please let us know. If there are any questions regarding our work please get back in touch.

Thank you very much.

Geoffrey O. Thompson M/S SC01-05
Chairman, IEEE 802.3 Working Group
Bay Networks, Inc
4401 Great America Parkway Phone: 408-495-1339
Post Office Box 58185 FAX : 408-988-5525
Santa Clara, CA 95052-8185 Internet E-Mail: gthompso@nortelnetworks.com
Copy: Jim Carlo, Chair, IEEE 802 <jcarlo@ti.com>

4.32 802.3ad to Sponsor Ballot -Thompson

Thompson reports on 802.3ad

LMSC Motion: Move that IEEE 802.3ad Draft 3.0 be issued for LMSC sponsor ballot and conditionally approve submittal of IEEE 802.3ad to RecCom for their consideration at the March 2000 meeting contingent upon the successful completion of the LMSC sponsor ballot, and recirculation, if necessary.

WG vote was 75/0/1.

M: Thompson
S: Lidinsky

Approved 11/0/0 11:34 PM

4.33 Future Plans for 802.5 Working Group -Love

(see file dot5future.pdf)

Love says that 802.5 will move towards an all electronic process, without holding meetings. Will hold meeting in March.

Nikolich states that this process is unusual. WG should finish its business, and decide whether to hibernate.

Thompson states concerns about maintenance of voting membership standards, and concerns about the ongoing demonstration of broad market potential.

The meeting was adjourned at 12:00pm.

Subject: Future Plans for the IEEE 802.5 Token Ring Working Group

The IEEE 802.5 Token Ring Working Group is now looking into the best short and long term strategies for advancing the work on Token Ring. While there is general agreement that the vast majority of the work has now been successfully completed, there are still open work items including maintenance issues and some minor enhancements. It is important that this work progress in the most efficient manner possible, and with the broadest possible review. The working group has seen a significant decrease in the number of its voting members over the last two years. This decrease prompts us to seek ways of maintaining and broadening the pool of experts available to contribute to and review our documents. As we look at the types of changes we may make, we note that there has already been a significant shift from progressing our work at meetings to electronic methods of working via the email reflector and the IEEE 802.5 web site. In line with this trend, one possibility is to move to a methodology that will allow us to advance most or all of our work electronically, without being encumbered by the requirement for face-to-face meetings. It would be desirable to expand our cadre of experts to include all those with an interest in Token Ring. No specific timeframe has been determined for moving to such a new mode of operation, although it is likely to happen some time in the year 2000. To meet this goal, we are establishing a call for interest and participation which is being widely distributed, and posted on our 802.5 Web site (www.8025.org).

Call for Interest and Participation

To prepare for changes to our mode of operation we are now opening up the IEEE 802.5 reflector to all interested parties that would like to participate electronically in the development and review of IEEE 802.5 documents. The working group would further appreciate those individuals identify themselves who are willing to serve in the cadre of experts and interested parties willing to review documents. Please send any such requests to join the group, and willingness to participate to the IEEE 802.5 reflector (stds-802-5@mail.ieee.org) or to me (rdlove@us.ibm.com).

Status of open work items in 802.5:

802.5t 100 Mbit/s Token Ring. The draft has been conditionally approved by the IEEE pending resolution of patent issues (patents that apply to 100 Megabit/s Ethernet Physical layer may apply to 100 Mbit/s Token Ring as well). It is

expected that all patent issues will be resolved by mid December with publication of 802.5t by the end of the year.

802.5v Gigabit Token Ring - 802.5 recirculation ballot closed with no negative comments. LMSC sponsor ballot due to start in December.

802.5w Corrigenda to 802.5:1998 and its Amd.1:1998. The LMSC Sponsor ballot closed with no negative votes. Changes implemented to address comments will require an LMSC Sponsor recirculation ballot. Expect close of comments by mid December in time for approval of 802.5w at the January IEEE Standards Board meeting.

802.5x - Source Routing for VLANs - Call for interest to be posted to the reflector - withdraw in March 2000 unless sufficient interest is expressed and an editor is forthcoming.

802.5z Link Aggregation: A first draft was presented at the November plenary meeting and adopted by the task force.

AGENDA & MINUTES(Unconfirmed) - IEEE 802 Closing Plenary Meeting

Friday, November 12, 1999 – 8:00 am.

Hyatt Regency Kauai

1. MEETING CALLED TO ORDER

Jim Carlo called the meeting to order at 8:00am.

Carlo recaps results from Thursday evening SEC meeting, including discontinuation of IPF, March 2000 20th Anniversary plans, March 2000 Elections, March 2000 Plenary meeting schedule. Carlo announces his plan to run for reelection as chairman of 802.

Paul Nikolich announces that rules change letter ballot will be distributed to SEC reflector today, will be posted to the 802all reflector within two weeks, maximum.

2.0 Treasurer's Report - Grow

(see file thutreasrep.pdf)

DATE: 11 November 1999

TO: SEC

FROM: Bob Grow

SUBJECT: Treasurer's Report (Item 3)

1. Estimated Statement of Operations for November 1999 (Kauai) meeting (attached)
2. Rolling Budget (attached)
3. Computer Society budget submission
   a. The two year budget submitted to the CS will be summarized from the Rolling Budget
   b. International Participation Fee will be recategorized and adjusted per Executive Committee discussion later in the agenda.
4. Compliance with Computer Society and SA financial policies
   a. Draft letter from Computer Society on maximum balance and checking signature (attached). The new processes give significant visibility into our financial operations. The SA also wants checking account signature.
   b. Audit Requirements. I am (on a time available basis) investigating our options for a financial audit. An annual audit is required per recently adopted CS financial policies. The IEEE can provide this audit, which is priced as a percentage of income. The audit period would be 1999, and coverage is typical and includes a sample of financial records, contracts, and minutes.
5. Deadbeat list

   802.3 Abe Ali Nov 98, Jul 99, Nov 99

IEEE Project 802
Estimated Statement of Operations
Nov 1999 Meeting

open	**7 Nov 1999 Operating Reserve**			**46,700**	
Nov 1999 Meeting Income:				***Actual***	*Budget*
152	**Registrations@**	**$300**	**45,600**		
322	**Registrations@**	**$250**	**80,500**		
0	**Registrations@**	**$100**	**0**		
	Subtotal			**126,100**	112,625
	Deadbeat Registrations			**0**	
	Cancellation Fees			**475**	
	Bank Interest			**100**	
	Copying Income				
	Other			**0**	
plus	**TOTAL Income**			**126,675**	112,625

Nov 1999 Meeting Expenses:	***Estimate***	*Budget*	
Audio Visual Rentals	**7,000**	6,000	
Bank Charges	**25**	25	
Copying	**5,900**	6,390	
Credit Card Discounts	**3,670**	3,277	*
International Program Fee	**42,600**	38,300	*
Meeting Administration	**24,600**	32,166	*
Phone & Electrical	**2,600**	900	
Refreshments	**25,800**	16,188	
Shipping	**4,500**	4,500	
Social	**23,411**	15,000	
Supplies			
Other	**1,400**		
minus **TOTAL Meeting Expense**	**141,506**	122,746	
minus **Equipment Expense**		0	
equals **Mar 2000 Operating Reserve**	**31,869**		
Net Change in Operating Reserve	**(14,831)**	(10,121)	

* Actual charges are based on registration, budget is based on registration forecast.

	1999				2000				2001			
	Austin *Actual*	Montreal *Actual*	Kauai *Estimate*		Albq. *Budget*	LaJolla *Budget*	Tampa *Budget*		Hilton Head *Budget*	Portland *Budget*	Austin *Budget*	
Meeting Income:	***March***	***July***	***Nov***	***1999***	***March***	***July***	***Nov***	***2000***	***March***	***July***	***Nov***	***2001***
Registrations	**415**	**469**	**474**		**425**	**400**	**400**		**375**	**375**	**375**	
Preregistration fee	**275**	**250**	**250**		**250**	**250**	**250**		**275**	**275**	**275**	
On-site registration fee	**300**	**300**	**300**		**300**	**300**	**300**		**300**	**300**	**300**	
Average Fee	**286**	**286**	**286**		**265**	**260**	**260**		**285**	**285**	**285**	
Subtotal	**118,800**	**124,650**	**126,100**	**369,550**	**112,625**	**104,000**	**104,000**	**320,625**	**106,875**	**106,875**	**106,875**	**320,625**
Bank Interest	**263**	**202**	**100**	**566**	**200**	**200**	**200**	**600**	**150**	**150**	**150**	**450**
TOTAL Income	**119,063**	**124,852**	**126,200**	**370,116**	**112,825**	**104,200**	**104,200**	**321,225**	**107,025**	**107,025**	**107,025**	**321,075**
Meeting Expenses:	***March***	***July***	***Nov***	***2000***	***March***	***July***	***Nov***	***2000***	***March***	***July***	***Nov***	***2001***
Audio Visual Rentals	**4,208**	**5,911**	**7,000**	**17,119**	**5,000**	**5,000**	**5,000**	**15,000**	**5,000**	**5,000**	**5,000**	**15,000**
Bank Charges	**1**	**133**	**25**	**159**	**25**	**25**	**25**	**75**	**30**	**30**	**30**	**90**
Copying	**4,819**	**2,384**	**5,900**	**13,103**	**5,950**	**6,000**	**5,200**	**17,150**	**4,500**	**4,500**	**4,500**	**13,500**
Credit Card Discounts	**3,383**	**3,245**	**3,670**	**10,298**	**3,154**	**2,912**	**2,912**	**8,978**	**2,993**	**2,993**	**2,993**	**8,978**
International Program Fee	**37,400**	**42,000**	**42,600**	**122,000**	**38,200**	**36,000**	**36,000**	**110,200**	**33,700**	**33,700**	**33,700**	**101,100**
Meeting Planners	**36,302**	**32,999**	**24,600**	**93,901**	**31,625**	**30,600**	**30,600**	**92,825**	**30,325**	**30,325**	**30,325**	**90,975**
Phone & Electrical	**822**	**618**	**2,600**	**4,040**	**800**	**800**	**800**	**2,400**	**800**	**800**	**800**	**2,400**
Refreshments	**15,814**	**9,988**	**25,800**	**51,602**	**10,625**	**14,400**	**13,200**	**38,225**	**12,000**	**12,000**	**12,000**	**36,000**
Shipping	**2,248**	**1,855**	**4,500**	**8,603**	**3,000**	**3,000**	**3,000**	**9,000**	**3,000**	**3,000**	**3,000**	**9,000**
Social	**9,596**	**7,125**	**23,411**	**40,132**	**7,650**	**9,200**	**8,400**	**25,250**	**7,500**	**7,500**	**7,500**	**22,500**
Supplies	**0**	**0**	**0**	**0**	**200**	**200**	**200**	**600**	**200**	**200**	**200**	**600**
Other	**1,100**	**70**	**1,400**	**2,570**	**2,100**		**1,500**	**3,600**	**2,000**		**1,500**	**3,500**
Meeting Equipment	**4,924**	**20,150**	**0**	**25,074**	**5,000**	**5,000**	**5,000**	**15,000**	**5,000**	**5,000**	**5,000**	**15,000**
TOTAL Meeting Expense	**120,617**	**126,479**	**141,506**	**388,602**	**113,329**	**113,137**	**111,837**	**338,303**	**107,048**	**105,048**	**106,548**	**318,643**
NET to Operating Reserve	**(1,554)**	**(1,627)**	**(15,306)**	**(18,486)**	**(504)**	**(8,937)**	**(7,637)**	**(17,078)**	**(23)**	**1,978**	**478**	**2,433**
Projected Opening Reserve	**49,480**	**47,963**	**46,336**		**31,031**	**30,527**	**21,590**		**13,953**	**13,931**	**15,908**	
Projected Closing Reserve	**47,926**	**46,336**	**31,031**		**30,527**	**21,590**	**13,953**		**13,931**	**15,908**	**16,386**	
Projected Closing Cash	**36,726**	**35,136**	**19,831**		**19,327**	**10,390**	**2,753**		**2,731**	**4,708**	**5,186**	

27 September 1999

Mr. Bob Grow
LMSC Treasurer

DRAFT DRAFT DRAFT DRAFT DRAFT

Dear Bob,

In order to be in accordance with Computer Society Policies and Procedures on the operation of external checking accounts by society entities, we ask that the IEEE 802 LAN/MAN Standards Committee (LMSC) forward a signature card to be signed by the CS Executive Director or his designee.

The CS Policies and Procedures for external checking accounts can be found in Section 17.7.1 (http://www.computer.org/csinfo/ppm/sect17.htm) and are also enclosed within this letter.

Per these financial procedures, this letter is also granting explicit approval to the LMSC to operate with an excess of $10,000 in its checking account. The LMSC will continue to handle its financial operations per the status-quo. However, we do also ask that we receive, at a minimum, a copy of at least four bank statements a year to be submitted quarterly and kept on file in the Computer Society office.

We hope that this arrangement will be acceptable to the IEEE 802 LAN/MAN Standards Committee and we appreciate your cooperation.

Sincerely,

Anne Marie Kelly
Director of Volunteer Services

Enclosure

Cc: Steve Diamond, *Vice President, Standards Activities Board*
Gary Robinson, *Treasurer, Standards Activities Board*
Jim Carlo, *Chair, IEEE 802 LMSC*
Tracy Woods, *Volunteer Services Coordinator*

Computer Society Policies and Procedures
(http://www.computer.org/csinfo/ppm/ppmtoc.htm)

SECTION 17 - FINANCES
17.7.1 Checking Accounts

1. Separate checking accounts may be kept by conference, standards and technical committees and other society entities if the operation of the accounts conforms to the policies herein. Such accounts may be established either at any local Merrill Lynch, Pierce, Fenner & Smith office through the society's Working Capital Management Account (WCMA), or with a local bank. WCMA account opening documents are available through the director of finance and administration.

2. If a separate locally based checking account is kept:

a. A designated representative shall be nominated by the appropriate committee chair and approved by the appropriate vice president.

b. Upon receipt of account signature cards signed by the designated representative, and the name, address, and telephone number of the bank, the executive director or his designee shall sign the signature cards and return these to open the checking account.

c. The Computer Society executive director or his designee must have access to the checking account and must receive a copy of the monthly statement of account.

d. At the conclusion of the committee's activities, the checking account shall be closed and the final balance submitted to the Computer Society with the final report.

e. The balance of any checking account shall not be in excess of $10,000 without the explicit approval of the appropriate officer of the society. Any funds in the checking account in excess of that amount shall be transferred by the designated representative back to the Computer Society. These excess funds from the checking account shall be credited to the appropriate entity or activity in the society accounting records.

3.0 Working Group Reports

3.1 802.1 – Lidinsky

(see file dot1friplen.pdf)

802.1 Status

Standards in Progress

802: Overview & Architecture

LMSC sponsor ballot in progress

Will process comments at March 2000 meeting

802.1r: GARP Proprietary Attribute Registration Protocol (GPRP) for 802.1d bridges

Pulling PAR - difficulty in resolving comments that could result in useful std

802.1s: Supplement to 802.1q; Support for multiple spanning trees

WG ballot closed 3 Nov. 1999

Revise and make available for Jan 2000 interim

Another WG ballot likely out of Jan. 2000 interim meeting

802.1t: Maintenance for 802.1d

Revise and make D4 available for Jan 2000 interim

WG ballot possible out of Jan 2000 interim meeting

802.1u: Maintenance for 802.1q

Revise and make available for Jan 2000 interim

WG ballot possible out of Jan 2000 interim meeting

802.1 Status

Standards in Progress (continued)

802.1v: VLAN Classification by Protocol and Port

WG ballot on D1 to close in time to process comments at Jan 2000 802.1 interim

802.1w: Rapid Reconfiguration

Revise and make D3 available for Jan 2000 interim

WG ballot likely out of March 2000 meeting

802.1x Port Based Network Access Control

Revise and make D3 available for Jan 2000 interim

Changing PAR to make .1x a stand-alone standard - not a supplement

802.3ad: Link Aggregation

802.1 voting members that have attended adequate 802.3ad mtgs.

802.1 made major contributions

LMSC sponsor ballot pool being formed

More info in 802.3 report...

802.1 Status

Liaison to IETF on ISSLL

802.1 liaised extensively with the IETF ISSLL WG from 1997 & 1998 on mapping integrated services on 802-like networks

802.1 told ISSLL that their current set of IETF drafts fit well with 802.1's QoS standards for layer-2 internetworking

802.1 reaffirming above.

IETF Liaison ***resolution out of 802.1***

Liaison to IETF on SRP

Presentation was made to 802.1 on SRP v2 during this meeting

802.1 would like to keep informed, especially on service definition

802.1 proposing to sponsor a tutorial on SRP at March 2000 mtg.

802.1 wishes to defer further actions until after tutorial

802.1 Status

802 Business and Process Issues

Operating Rules Changes for Working Groups

IPF fund

Availability of 802 standards documents

802.1 Interim Meeting and Pre-Meeting

Interim Mtg.: Week of Jan. 17-21 in Dallas TX
Co-located with 802.3ad

Pre-Mtg.: Monday morning of the next 802 plenary in March 2000 in Albuquerque NM

3.2 802.3 – Thompson

(see file dot3friplen.pdf)

3.3 802.5 – Love

No handouts.

Corrigenda to LMSC recirculation

Gigabit TR to LMSC Ballot

Link Aggregation to Working Group Ballot

100 Mb/s TR patent letters expected before the end of the CY.

Moving toward electronic meetings and conducting business via email.

3.4 802.8 – Benson

Carlo states that 802.8 recirculation should start one week after this meeting. Expect TAG to hibernate at March meeting.

3.5 802.11 – Hayes

(see file dot11friplen.pdf)

802.3 CSMA/CD Working Group Status

- Major Activities this week:
  - 802.3ad/Link Aggregation
    Voted to Sponsor Ballot
  - 802.3 HSSG (10 Gigabit Ethernet)
    P802.3ae PAR forwarded to NESCOM
  - DTE Power via MDI
    P802.3af PAR forwarded to NESCOM
  - 1802.3 Rev. (10BASE-T Conformance)
    P802.3rev PAR forwarded to NESCOM

802.3 CSMA/CD Working Group Officers

- 802.3 Chair: Geoff Thompson (gthompso@nortelnetworks.com)
- 802.3 Vice Chair: David Law (davel@pdd.3Com.com)
- 802.3 Secretary: Bob Grow (bob.grow@intel.com)
- 802.3ad, Link Aggregation: Steve Haddock (shaddock@extremenetworks.com)
- 10 Gigabit Ethernet: Jonathan Thatcher (jonthan@picolight.com)
- DTE Power via MDI: Steve Carlson (scarlson@esta.org)

- 802.3 CSMA/CD Web site
- Information always available on our web site: http://grouper.ieee.org/groups/802/3/index.html

- Next meeting: Week of Jan 17
- Doubletree Hotel at Lincoln Centre
- 5410 LBJ Freeway
- Dallas, Texas 75240
- Phone: (972) 934-8400
- Fax: (972) 701-5210
- < <http://www.doubletreehotels.com>http://www.doubletreehotels.com> <http://www.doubletreehotels.com>http://www.doubletreehotels.com
- "Freshly baked cookies await you..."

- Group Rates (per night):
- Standard Single/Double Occupancy: $109
- Executive Single/Double Occupancy: $189

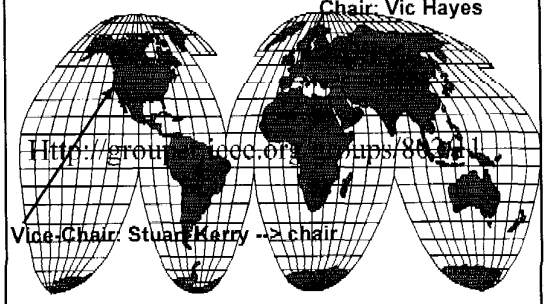
- Please identify yourself as being in: "Texas Instruments - IEEE Group"

- Deadline for reservation: Tuesday Dec 28, 1999

P802.11 at The July 1997 session

IEEE P802.11, Wireless LANs

Chair: Vic Hayes



Http://grouper.ieee.org/groups/802/11

Vice-Chair: Stuart Kerry --> chair

1

IEEE P802.11, Wireless LANs

Status of 802.11b

- Will be published with a note that the update of the Management Information Base (MIB) is currently being worked on
- All people can obtain the eventual contents and drafts on the web (URL provided in the standard)
- PAR for Corrigendum submitted for approval at January 2000 Standards Board meeting
- Plan to publish new document July 2000

2

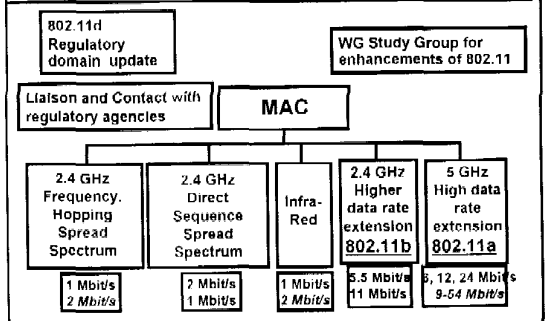
IEEE P802.11, Wireless LANs

Objectives for this meeting

- Draft text for 802.11d
- Draft PAR and 5 Criteria for SG MAC Enhancements
- Send letters to liaison groups and to regulatory agencies as needed, for example:
  - FCC NPRM ET Docket No. 99-231
  - FCC NPRM ET Docket No. 99-42
  - WRC 2000/2002

3

IEEE P802.11, Wireless LANs



Legend: italic (and red) = optional

4

IEEE P802.11, Wireless LANs

Regulatory matters

- 5 GHz band
  - Prepared a letter for responding to a Consultation Document from the UK administration indicating that we are supporting the opening of the band in UK and further in Europe
    - » Also indicated that we would like to have some limitation so we would not get too much crowding from e.g. low data rate equipment

  Prepared a letter for submission by Boeing to make the it known that IEEE 802.11 supports the worldwide assignment and harmonization of the 5 GHz band for unlicensed devices
- 2.45 GHz band
  - Prepared a letter for the FCC to indicate our continued interest in what we filed in the first phase of the proceedings
- Will use legal counsel as well as re-editing and will use e-mail approval from SEC

5

IEEE P802.11, Wireless LANs

TGd, Regulatory domains

- Task Group produced their first draft standard
- Will be sent out for WG letter ballot

Study Group MAC Enhancements

- Prepared 2 PARs and 5 Criteria
- Are ready for submission to SEC
- Extended the SG till March 2000 meeting to obtain final approval

6

3.6 802.14 – Sherman

(see file dot14friplen.pdf)

802.14 / 802.14a Ballot results

- 802.14
  - Voters: 37 Returns out of 50 Voting Members
    - 74 % Return rate > 50% Threshold
  - Approve 36 / Do Not Approve 0 / Abstain 1
  - Unanimous 100% Approval with some comments
- 802.14a
  - Voters: 38 Returns out of 50 Voting Members
    - 76 % Return rate > 50% Threshold
  - Approve 37 / Do Not Approve 0 / Abstain 1
  - Unanimous 100% Approval with some comments

Withdraw Ballot Comment Summary

- Recommendations on disband / hibernate
- Questions on what will happen to 802.14 ftp site, web site, reflector
- Questions about maintaining a group of experts
- Addition of comments to 802.14a draft
- Posting of DOCSIS 1.1 presentation material
- Comments concerning general views and opinions

802.14 Action Plan

CLEAN UP SHOP!

- Recommend leaving PARs in place till March when cleanup completed!
- Apprise SCTE, ATM Forum and DAVIC of 802.14 Decisions and Status
- Resolve remaining withdrawal ballot comments
- Create 802.14 IEEE web page (tombstone)
- Do web page with pointers to key files and 802.14 Historian (Robert).
  - 802.14 draft
  - 802.14a draft with comments
- Notice to everyone that WalkingDog will go away in March and any remaining information will be on the IEEE.ORG site as warranted.
  - Folks can download data they desire on their own
- Burn a few CD ROMs to completely archive WalkingDog contents for key individuals
- Robert Russell will remain on as Point of Contact and assemble contact information of all those desiring to be kept in contact with.

David Fellows
DOCSIS Certification Board Chair
Cable Television Laboratories
400 Centennial Parkway
Louisville, Co 80027-1266

Dear David,

In response to your letter of Sept.8, 1999 to Robert Russell and Roger Durand, as well subsequent discussions since then, the 802.14 working group has come to the conclusion that no further development work remains to be done for 802.14 in the area of Cable TV PHY/MAC. Accordingly, a ballot has been held and passed on to withdraw the 802.14 and 802.14a PARs. This recommendation has been passed to the 802 Executive Committee. The executive committee and 802.14 leadership have jointly decided that there is still cleanup work to be done in terms of “mothballing” the current drafts, and material on the 802.14 and 802.14a FTP sites. The 802 Executive Committee has therefore decided to defer action on the status of the 802.14 and 802.14a PAR’s until the next meeting of the 802 Executive Committee (March 2000). At that time the PARs will be submitted for withdrawal, and the 802.14/14a Working Groups will do no further development work in the area of Cable TV MAC/PHY, although other new work may be pursued.

Sincerely,

Jim Carlo
Chair 802 Executive Committee

3.7 802.15 – Heile

(see file dot15friplen.pdf)

Project: IEEE P802.15 Working Group for Wireless Personal Area Networks (WPANs)

Submission Title: WG Friday Report to 802
Date Submitted: November 12, 1999
Source: Robert F. Heile Company: GTE
Address: 40 Sylvan Road, Waltham, MA 02451
Voice:781-466-2057, FAX: 781-466-2575, E-Mail:bheile@bbn.com

Re:

Abstract: Summary of week's meeting activity

Purpose: Inform 802 membership

Notice: This document has been prepared to assist the IEEE P802.15. It is offered as a basis for discussion and is not binding on the contributing individual(s) or organization(s). The material in this document is subject to change in form and content after further study. The contributor(s) reserve(s) the right to add, amend or withdraw material contained herein.
Release: The contributor acknowledges and accepts that this contribution becomes the property of IEEE and may be made publicly available by P802.15.

Overall Objectives of the Kauai Meeting of 802.15 - November 8-12, 1999

- VOTE TO SUBMIT DRAFT 0.6 TO WG LETTER BALLOT #1
  - Ballot initiated on Thursday, November 11, 1999
- PROVIDE AN OVERVIEW OF THE IEEE 802.15 TG1 DRAFT V1.0 DERIVED FROM THE BLUETOOTH SPECIFICATION(S)
  - Tuesday night tutorial #3
- SUMBIT COEXISTENCE SG PAR TO THE SEC FOR REVIEW AND APPROVAL
  - Procedure for joint operation agreed to in joint session with 802.11. Draft Recommended Practice will go to Letter Ballot in both groups
  - Coexistence PAR, 802.15.2, approved by the SEC for forwarding to NesCom

Overall Objectives of the Kauai Meeting of 802.15 - November 8-12, 1999

- LIAISON WITH 802.11 ON COEXISTENCE / REGULATORY ISSUES
  - Successful Joint session with 802.11 on Wednesday
- ESTABLISH A DRAFT MARKETING ACTION PLAN/TIMELINE
  - Will move to secure various appropriate URLs
- CONDUCT A CALL FOR INTEREST TO FORM SG ON HIGH RATE WPANs
  - Formed Study Group within 802.15 to draft PAR and 5 Criteria for a High Rate WPAN, Jim Allen, Kodak appointed as Chair.

Next Meeting

- Joint Interim Meeting with 802.11, January 10-14, Tel Aviv, Israel.
- Meeting Details and contact info for the Officers of 802.15 can be found on the Web site: http://grouper.ieee.org/groups/802/15/

3.8 802.16 – Marks

No handouts

New study group formed for sub 10 GigaHertz operation.

Heard many proposals for MAC and PHY. Used scoring system to select proposals to invite back for further presentations.

3.9 Future Meeting Arrangements – Rigsbee

Next meeting is in Albuquerque March 6-10, 2000.

Maybe coming back to Kauai in November, 2002.

4.0 Adjourn

The meeting was adjourned at 9:02 am.

Respectfully Submitted,
Howard Frazier
Recording Secretary